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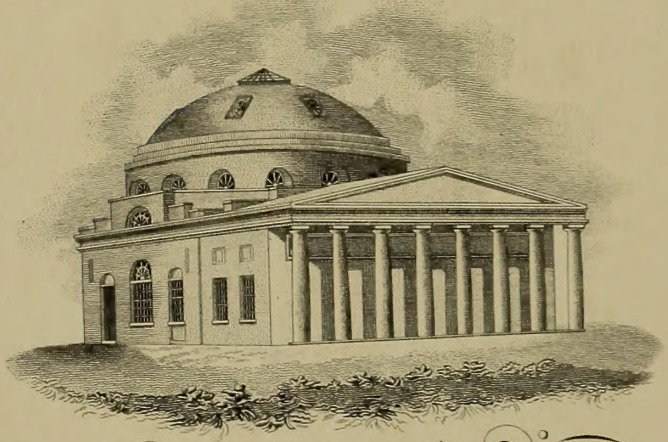

University of Maryland

University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

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Author	Title
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UNIVERSITY OF MARYLAND

THESES

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AN

Inaugural Dissertation

ON

Digestion

SUBMITTED TO THE EXAMINATION

of the

Provost, Regents and Faculty

of

PHYSIC,

of the

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

Doctor of Medicine,

by

John O. Skinner

of

Maryland.

Session 1845-6

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Digestion is that reduction of food to a condition preparatory to its imbibition by the absorbents, any extensive deviation from which results inevitable in disease varying in character and intensity proportionate to the extent and length of time with which the process has been interfered.

In considering this subject we should remember the fact that vegetables possess this power to a limited extent and in as much as they receive their nourishment from inorganic substances exclusively, no change from its natural state is requisite for its assimilation, consequently

no digestive apparatus is necessary.

" animals like man, derive their nutrition from both the organic and inorganic Kingdoms, and as the exigencies of the case require, the conversion of the former to a consistency suitable for its absorption as being not only essential to the enjoyment of health but conducive to the continuation of life, considerate nature has made ample provision for this deficiency by bestowing upon animals, and many a digestive apparatus peculiarly adapted to their respective organizations.

"The digestive apparatus in man resembles almost exactly that of the carnivora". (Dalton). And in speaking

of its comparison with that of carnivora he says. "in the human species, however, the process of digestion though similar than in herbivora is still complicated."

The digestive apparatus in man, consists of an "alimentary canal" divided into apartments communicating with each other, and running from the mouth to the anus. First in order we have the mouth, in which the first process is accomplished.- viz mastication and insalivation, previous to its entrance through the oesophagus, into the stomach. Secondly - we find a gourd shaped compartment termed the

Stomach consisting of two divisions, and extremities an upper (cardiac) which is continuous with the asophagus, and a lower (pyloric) which terminates at the duodenum.

Thirdly.- We discover the duodenum, into which both the ductus communis choledochus and pancreatic duct empty: each conveying a digestive fluid; the former the bile, the latter, the pancreatic juice, in connection with the jejunum and ileum constituting the small intestines.

Fourthly.- and finally, we find the large intestines, comprising the cecum, (separated from the ileum by

a valve, ileo-caecal) the colon, divid
ed into three parts viz ascending,
transverse and descending, and rec-
tum terminating at the anus,
through which all excrementitious
matter is discharged.

Having briefly
reviewed the anatomical arrangement
of the digestive organs, we will
now consider the process itself, the
fluids engaged, together with their
respective characters, offices &c.
The first act performed in the mouth
as preliminary to insalivation is purely
mechanical. I allude to mastication,
a process, though simple in itself,
has in view a more important

attainment; for we can readily ap-
preciate the fact that a perfect
solution is greatly facilitated by
converting the food to a form and
condition favorable to its permeation
by the digestive fluids, the first
of which is saliva,- a colorless, slig
htly viscid and alkaline fluid
with a specific gravity of 1005
(Dalton). We are also informed that
saliva is composed of secretions
from four sources, to wit: parotid,
submaxillary, and sublingual gl-
ands, and the mucous follicles
of the mouth - the secretion of the
latter being more viscid than
that of the submaxillary glands,

that of the submaxillary more so than that of the sublingual, and that of the parotid being altogether deficient in this quality.

The conclusions arrived at in regard to the amount of Salivary daily secreted, vary from less than three pounds, to three and a half pounds.

The supposed physiological office of this Secretion,- viz- the digestion of the Starchy elements of the food, has been proven to be erroneous; a refutation which has been fully sustained by more recent observations and experiments; it being now generally conceded that its action is physical - viz assisting mastication

by softening the mass and facilitating deglutition by lubricating the same. After leaving the mouth, it is seized by the pharyngeal muscles, after which, it is placed beyond the control of the will, and is transmitted through the oesophagus into the stomach, where the most important part of digestion is accomplished. The mucous membrane of the stomach secretes a fluid, termed gastric juice, which "is a clear, watery fluid, without any appreciable viscidity, very distinctly acid to the test paper, of a faint amber color, and a specific gravity of 1010" (Dalton). The average

quantity daily secreted is fourteen pounds. Although it varies in accordance with the quantity and quality of food taken, or it may be greatly influenced by mental impressions, or entirely suppressed by any violent irritation of the nervous system, such as unusual mental or physical indulgences, if I may so term it. Hence we appreciate the impropriety of over exerting the faculties of either immediately after partaking of a meal. We must remember however that the gastric juice, together with the digested food, is immediately be absorbed, thus restoring to the blood the fluid it loses.

fully illustrating the perfect regularity of the endosmose, and exosmoses, as it were, of the gastric juice, when we discover that the blood is very seldom deficient in more than two ounces of fluid at one time, as the result of the supply to the gastric juice. Pepsine is held to be the most important of the ingredients of the gastric juice, with the exception of a "free acid" upon whose character, two opinions are entertained, the advocates of one asserting it to be lactic, while their opponents contend that it is hydrochloric, the latter of which, I believe however, is the acknowledged

one. There is also associated, or connected with Stomach digestion, a process almost indigestable. Viz. Peristaltic action, which is caused by the alternating contractions, and relaxations of the fibres which enter into the constitution of the muscular coat of this organ, and exists during digestion only. By this assistance an important indication is fulfilled, Viz, the constant change of position of the bolus, which by presenting different surfaces to the mucous membrane, enables it to receive more fluid, and obviates in a measure, I think, the tendency to

too great an irritation of the part, which might prove, according to a well established law in medicine viz- "a secretion stimulated to excess will eventually be suppressed" exceedingly detrimental to the proper performance of this function. We will now become acquainted with the office of the gastric juice. We are told that it converts, not by a chemical solution, but by a "catalytic transformation" albuminoid substances, into a peculiar product termed albuminose, which differs from albumen in some respects. Thus, we all know that albuminous urine turns, on boiling, a white precipitate

upon adding to it a small quantity of nitric acid and a white cloud is formed upon the application of a boiling temperature, not so, however, with albuminose which is unaffected by these tests, although it is precipitated like albumen by an excess of alcohol, and by the metallic salts."

One of the peculiarities belonging to albuminose is its incompatibility with Trommer's test for sugar. If a small quantity is mixed in solution with sugar, the mixture assumes a purple color in lieu of the blue one generally displayed, and on boiling it takes on ultimately

a yellow hue no deposition of copper occurring however.
In the consideration of the peculiar and astonishing action of gastric juice upon albuminoid substances, we are surprised to see how averse it is to the destruction of the lining mucous membrane of the stomach during life, a satisfactory explanation of which is given, I think by Mr. Dalton in the following lengthy paragraph. "The process of digestion is not a simple solution, but a catalytic transformation of the alimentary substances produced by contact with the pepsine of the gastric juice. We know that all the organic sub-

stances in the living tissues are constantly undergoing, in the process of nutrition, a series of catalytic changes, which are characteristic of the vital operations and which are determined by the organized materials with which they are in contact, and by all the other conditions present in the living organism.

These changes therefore of nutrition, secretion &c necessarily exclude for the time, all other catalyses, and take precedence of them. In the same way any dead organic matter, exposed to warmth, air, and moisture, putrefies: but if immersed in gastric juice, at the same

temperature, the putrefactive changes are stopped or altogether prevented, because the catalytic actions excited by the gastric juice take precedence of those which constitute putrefaction. For a similar reason the organic ingredient of the gastric juice, which acts readily on dead animal matter, has no effect on the living tissues of the stomach, because they are already subject to other catalytic influences, which exclude those of digestion, as well as those of putrefaction. As soon as life departs, however, and the peculiar actions taking place in the living tissues come to

an end with the stoppage of the circulation, the walls of the stomach are really attacked by the gastric juice remaining in its cavity, and are more or less completely digested and liquefied. In the human subject it is rare to make an examination of the body twenty-four or thirty-six hours after death, without finding the mucous membrane of the great pouch of the stomach more or less softened and disintegrated from this cause.

These post mortem changes show that, after death the gastric juice really dissolves the coats of the stomach without difficulty. But during

life, the chemical changes of nutrition, which are going on in their tissues protect them from its influence, and effectually preserve their integrity."

The next fluid with which we meet, after leaving the stomach is the bile, which is secreted by the liver, a glandular organ, situated in the immediate vicinity of the alimentary canal, and "is a somewhat viscid and glutinous fluid, of a dark brown color and the specific gravity of 1018." Its reaction is neutral or slightly alkaline. The principal ingredients of

human bile are, biliverdine and cholesterine, the former being the coloring matter the latter supposed to be generated in the brain, as Prof. J. Flint detected "One quarter part more cholesterine in the blood of the jugular, returning from the brain than in that of the carotid artery, before its passage through that organ." Although the bile does not take an active part in the digestion of any particular kind of food, and would appear, judging from its source, and the effects resulting from its suppression, to be an "excrementitious matter, Still it has

been satisfactorily proven that the secretion is an adjunct essential to life. Bile differs from the gastric juice in the time and manner of its secretion. Thus, while we find gastric juice to be an intermittent secretion existing only during digestion, we find bile to be a constant one; and while we find gastric juice, flowing in abundance four hours after eating, we find bile diminishing at the expiration of the first hour. The quantity of bile supposed to be daily secreted in a healthy person, is two and a half pounds. And upon examining the intestines

we will also find the quantity of bile diminishing from above downwards. So that upon reaching the caecum we discover no bile, and in connection with this deficiency of bile in the large intestine, we take cognizance of the altered "color and consistency of the faces, which have changed to a dark brown". Now relative to the destination and ultimate uses of this secretion, little is as yet known, but it is supposed that the biliary matter is transformed by catalysis into a substance more easily absorbed, after which it probably subserves the wants of

the economy in some other quarter at some future period.

The next fluid that engages our attention is the pancreatic, which is conveyed to the duodenum by a duct leading from the pancreas to it. Its orifice is situated below that of the biliary duct. This secretion "is a clear colorless, somewhat viscid fluid, with a distinct alkaline reaction."

It assists digestion by effecting a reduction of the oily constituents of the food, to the consistency of an emulsion, which is more readily absorbed, and is distinguished

by the name of chyle. This fluid also has the power of changing starchy elements to saccharine, but as proof is wanting in regard to it's permanent presence in the intestines, and knowing that the intestinal juice proper possesses this capacity we may safely infer, that the latter accomplishes that object.

The last juice connected with digestion is the intestinal juice proper, which is composed of the secretions from two sets of glands. viz. Those of Brunner, and those of Lieberkuhn. "It is colorless and glassy in appearance, viscid

and mucous in consistency, and has a distinct chemical action." Its function is the conversion of Starch into Sugar, which is absorbed with unusual rapidity, leaving, it is said, left no trace of its existence, in the short Space of time ("forty-five minutes"), after admission thereto. We have now finished the Subject of digestion, as it is conducted in the Small intestines, and we will briefly regard that which is performed in the Large intestines, which is inextricably blended with a process of Excretion viz. the discharge of the faeces.

Two substances are excreted by the mucous membrane of the large intestines, named respectively - Excretine and Stercorine, - the former discovered by marcet the latter by Flint, who supposed it to be a transformation from cholesterine. These bodies together with a "certain amount of fat, fatty acids, and a remnant of undigested food constitute the human faeces. After the elapse of several hours, subsequent to the completion of this process, there supervenes a sense of hunger, which may not be cognizable to the individual provided his attention be diverted

from his immediate comfort, and directed to a subject or object which requires an exercise of his mental or physical faculties, until a feeling of weakness becomes so excessive as to render necessary, in order to preserve health and strength, an appropriation of a quantity of food, sufficient to supply the wants of the system. Dr. Beaumont thinks that the proximate cause of hunger is a distension of the secreting follicles of the stomach, while Dr. Carpenter attributes it to "a certain condition of the capillary circulation in the stomach, which is preparatory

to the secretion, and which is excited by the influence of the sympathetic nerves, that communicate as it were, the mind, of the general system." The sensation is caused by an impression made upon the pur vagum, by the distended capillaries, which capillaries being relieved by the secretion necessary to stomach digestion, the sense of hunger is appeased.

But Dr. Stille, speaking of the physiological action of Opium in allaying this disagreeable feeling, says - "it is supposed by many that hunger is produced by the peristaltic movements

of the empty Stomach, causing attrition of the opposite faces of its lining membrane, On this supposition, opium, by arresting this movement, and at the same time blunting the sensibility of the gastric nerves would suspend or mask the sensation. I am inclined to think that the latter, viz the obtunding of the nerves distributed to this organ is the proper modus operandi of this drug.

The sense of thirst is referable to the same cause, namely, a demand of system at large for fluids, and generally manifests itself by a dryness of the fauces,

though resulting from an impression upon the nerves of the stomach, since if liquids are introduced into the organ through an oesophageal tube, they are just as effectual in allaying thirst as if they are swallowed in the ordinary manner.

And this function with its concomitant healthy phenomena, continues until the individual ceases to exist. The product (the chyle) which is obtained by this process subserves the wants of the economy by being primarily converted into blood, and ultimately transformed into tissues, which tissues, becoming

organized, remain until they fulfill a special purpose, when they become disintegrated, and are replaced by recently developed ones.

AN

Inaugural Dissertation

ON

CAUSES OF DISEASE.

SUBMITTED TO THE EXAMINATION

of the

Provost, Regents and Faculty

of

PHYSIC,

of the

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

Doctor of Medicine,

by

Wm Warrington Evans

of

Maryland

Session MDCCCLXVI-MDCCCLXVII 1866.

The Causes of Disease.

The ascertained causes of disease are many and various.

The atmosphere in which we are constantly immersed is full of dangers. Both the organic and the inorganic world of matter around abound in poisons; they lurk in our very food which becomes pernicious when taken in excess or when it consists in certain substances, or certain admixtures of substances.

The seeds of our decay are within as well as around us. If we [illegible]

[illegible] and more common [illegible] excess in eating and intemperance in drinking.

There are also various persons which exert a powerful influence in giving origin to disease.

Another great cause of disease may be ascribed to certain habits or avocations, which are injurious.

Consider also bodily exercise as essential to health, while neglecting a certain amount we see the evils of infirmities and disorders arising from too severe labor. But far worse are the evils

tion [illegible], [illegible] either specific is used. Excessive indulgence [illegible] or the want of repose [illegible] maladies. Many diseases have a mental origin. Excessive intellectual toil, and perhaps there is no [illegible] [illegible] clearly made [illegible] protracted anxiety and distress of mind. Now when we add to our catalogue of the causes of disease, all those morbid tendencies which are hereditary and those which arise from malformation and are congenital, we have, except the chemical and mechanical injuries, the

most important of manifold dangers to which our mortal frames are continually liable. And here I may observe to know the cause of a disease, is sometimes to be able to cure and often to prevent it. Suppose we take heat and cold as external agencies capable of producing disease. Under the burning sun-shine of the tropics, and amid the profound frosts of the polar regions, we likewise find human dwellers. It requires, however, as we are told by pathologists, more care to preserve life under intense

cold than under intense heat, but for a short time, and under certain circumstances, man is capable of enduring a very much higher temperature of heat than the atmosphere ever attains in the hottest regions of the earth. Whether he could exist for even a short time, under a much more intense cold than ever occurs in the surface of the globe is more questionable. One very constant effect of heat is that it stimulates organic functions. We are told from a temporary application of heat the heart becomes much accelerated

On the other hand, in some sort of contrast, when we have considerable heat applied to us for some time, it has a sedative influence on the nervous system — producing indisposition to exertion both bodily and mental. But there are some forms of disease which are distinctly traceable to heat as a cause.

The effect of hot weather in promoting cutaneous perspiration is notorious. By the same influence the depurative function is rendered more active, increasing the quantity of urine that is secreted, and

attains its maximum; and frequently this is followed by inflammation of the gland itself.

Almost invariably, after a succession of sultry weather, towards the latter end of summer we witness in those attacks of vomiting and diarrhœa the effects apparently resulting from the excessive quantity or state of the bile. In tropical climates the same morbific operation of external heat is still more conspicuous, leading not only to a vitiation of the stomach and intestines but to inflammation of the liver,

resulting in suppuration of that organ and the formation of large abscesses.

Persons exposed to the direct heat of the sun, especially during hot weather, are apt to be affected with what is known as Sun Stroke.

This disorder is common among troops during long marches in India. The cause of this disease has long been known to inhabitants of hot climates.

We pass now to the effects of cold upon the system. With respect to external cold we are well aware

of its sedative influence upon the animal functions — when it becomes very intense — producing a state resembling intoxication, overpowering drowsiness, especially when it has had an auxiliary in fatigue — and ultimately death.

I hardly need state that when cold is within certain limits of intensity, the effects of it upon the body are totally different from all this. When not intense, or when intense & its refrigerating powers are counteracted by exercise & warm clothing, cold becomes a tonic; invigorating both mind and

body. Instead of benumbing it
hightens sensibility. Instead of stu-
pefying it sharpens the intellect, and
in this and many others it becomes
a curative agent. Nevertheless, ex-
-posure to cold is one of the most
common causes to which the body
is liable. Many of the internal in-
-flammations acknowledge as their
exciting cause. Acute Rheumatism
has perhaps no other external origin.
Apoplexy, Palsy, and Dropsy
are its frequent consequences. It has
long been a popular idea that sudden
vicissitudes of temperature are dangerous:

that a person in this state exposes to the hurtful effects of cold. But the proposition is by no means universally true. It is well known that the Inhabitants of Russia, while reeking from their vapor baths, plunge instantly in the snow or cold water without suffering from the change. We are informed then that the most direct statement respecting the application of cold, that it is dangerous not when the body is hot, but when the body is cooling after having been heated. Whether applied to the surface of the body or.

to the mucus membrane of the stomach the principle obtains the like. Very many instances are recorded of death taking place immediately after taking a draught of cold water.

The fatal influences of cold water thus applied was experienced on a large scale among the troops of Alexander the great, upon their reaching the banks of the river Oxus, thirsty, fatigued and perspiring from their toilsome march of forty six miles across the scorching sands of the desert. According to Quintus Curtius Alexander lost more of his soldiers on that

occasion them in any one of the latter.

The bad effect of cold upon the system depends partly upon the intensity of the sensation it produces but still more upon the duration of that intensity. Cold is more likely to prove injurious when it is applied in a wind or current of air. Again, the injurious operation of cold is augmented, when it is accompanied with moisture. Wetness is notoriously the worst form in which cold can be applied.

For the same reason, a cold, foggy atmosphere is more injurious

=dicial than a clear, and therefore drier one of the same temperature.

The bad effect of cold upon the system is certainly modified by the degree of attention that is paid to the sensation it excites.

Take for instance persons gasping for breath with spasmodic asthma, who will remain for hours at an open window, with scarcely any clothing on, exposed to the frosty currents of air and still no bad effects result.

We pass on, merely mentioning cold as freezing up the vital powers

of the body. Sleep is enumerated among those conditions of the body which diminish the power of resisting cold. And certainly, cold is very readily caught when its causes are present during sleep. The experiment of hardening a person by cold should never be attempted in a person ailing, complaining, or unsound; who shows any signs of present disease; or any marked disposition to future, and especially scrofulous disease. Closely connected with the effects of temperature on health is the influence of different

seasons of the year. It is upon the common observation that the general health of the Community fluctuates with the changing seasons.

Catarrhs, and coughs, and pectoral complaints of all kinds, are more apt to commence or grow worse in the winter and spring months; while bowel complaints are more common in summer and autumn.

But the thoracic disorders are more serious and fatal than the abdominal. Various other maladies are likewise aggravated by cold, or by vicissitudes of temperature.

We believe the injurious effects of the severe weather of winter are generally more common among the very young and very old; that is among those in whom the recuperative power of generating heat is the feeblest. The number of deaths by apoplexies and palsies said to be greater in winter; and we think that can be intelligently explained; suppose the surface is chilled, and the blood driven out of the superficial vessels by cold, it must accumulate in internal parts and so press

with increased force towards the lungs.

Mere impurities of air — by which we mean impurity that does not result from the admixture of any special poison — is a powerful predisposing cause of disease. We have this beautifully illustrated, by comparing inhabitants of great towns in respect of health and longevity of life, with those who live in the country. For a conviction of this let the annual statistics suffice.

The noxious and depressing influence of vitiated air is made strikingly manifest by the effect

of removal to a purer atmosphere.

We are continually recommending "change of air" to our patients. We advise them to go out of large cities where "houses thick and sewers annoy the air" — that their recovery from acute disorders may be accelerated and that they may require the degree of general strength which is necessary to cure the many chronic complaints, — of all those especially that require tonics, among which class of remedies no one is so effectual, in constitutions which have been weakened by a town life

in proportion to the clear and pure air of the country. If there be any diseased condition that is strictly the product of impure air, it is scrofula. This disease depends in part on hereditary constitution; it results mainly from cold and wet: but there is much reason for believing that impure air is a very powerful agent in calling scrofula into action, and in aggravating the strumous diathesis. The influence of species poison upon an impure state of the atmosphere is shown in the fact, that it is almost en-

causes confined to the filthy and confined holds of vessels & to towns or other situations where the population is dense and many causes exist calculated to impair the purity of the atmosphere. That specific disease is produced by impure air is a fact established by the most abundant and conclusive authority.

Whenever we find individuals crowded together in localities where filth is accumulated, and a free ventilation is prevented, there also we find diseases to prevail, evidently dependent upon the impure and

stagnant condition of the atmosphere. It cannot, certainly, be denied that it is the impurity of the air produced by decomposition of the exhalations, and excretions of individuals regardless of personal and domestic cleanliness, when crowded together in confined apartments, that we are apt to refer the production of Typhus fever, so apt to pre-vail under such circumstances, as well as the typhoid character of most other diseases. Typhus fever, we know, is particularly liable to be produced in camps, barracks,

hospitals, prisons, mines, or houses and on board of ships, whenever in such situations a number of persons are crowded together, and cleanliness and ventilation are neglected; and it is seldom, if ever, generated where the sources of impurity are carefully removed and a free and constant ventilation secured.

Besides there are many other causes of disease, such as malaria being the cause of ague; contagions being the cause of exanthemata and continued fevers, Epidemic influences

of epidemic distempers; improper and insufficient diet and intemperance generally being the source of indigestion and disorders of the alimentary canal and so on; Now a few remarks on the hereditary tendency of disease, under which head stands scrofula, gout, mania, and spasmodic asthma. Gout, in those capable of it, may be acquired by habits, as it may be prevented and repressed by opposite habits. The habits, which in certain persons, bring it on, are the intemperate use of the

injuries of the table and an indolent and sedentary manner of life: but there are many in whom no amount of rich living and idleness will generate gout. So there are some in whom no exposure to impure air, cold, and wet and no privations will ever produce scrofula or render them consumptive.

By way of conclusion let us refer to general epidemics as presenting some of the most wonderful and unaccountable events that occur in the history of our race. The sources whence they

wise are themes of inexhaustible discussion. Let us look back to the fifteenth century and behold the "Black death" spreading rapidly over all Europe, leading forth its ravages without respect to country or constitution. And here in our own century has the Asiatic Cholera covered with its dark shadow almost the whole habitable globe and swept millions into the tomb.

Neither seas nor deserts availed to arrest its career. Its ravages were felt in China and Constantinople,

and the pestilence in the vicinity of the holy cities were whitened with the bones of Pilgrims.

Within England, nor France enveloped in all the safeguards which science and art could offer experienced any exemption, nor were the waves of the broad Atlantic a sufficient barrier.

The sea coast and the interior of our own beloved country and the banks of our majestic rivers, have scarcely ceased of late to mourn its presence.

Its victims were multiplied fearfully

at Naples and its mortality, every where awfully great, seemed, more frightful than ever at the foot of Etna and Vesuvius.

Even now while writing, this fearful epidemic is raging on foreign shores, and not a mail that comes across the briny deep, but tells us of its fearful ravages experienced by our Eastern neighbors.

Its dark mantle never clouded the Eastern Hemisphere, nor also threatened America raging with such unprecedented violence upon the Caribbee Islands

of the West Indies, that we cannot but expect an unwelcome visit from it in the Spring, therefore the preparations being made for its reception and to obviate the impending dangers cannot be too strictly carried out.

May the time come when epidemics shall cease to fluctuate and the rolling orbs of Heaven look down and behold the "Causes of Disease" stricken from the great book of Nature.

Wm. H. Evans

AN

Inaugural Dissertation

ON

ABORTION.

SUBMITTED TO THE EXAMINATION

of the

Provost, Regents and Faculty

of

PHYSIC,

of the

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

Doctor of Medicine,

by

John M. Beckenbaugh

of

Frederick City, Maryland.

Session Fifty-eighth, 1866.

To

George H. Mollenberger, M.D.,

Prof. of Obstetrics,

and

Diseases of Women & Children,

in the

University of Maryland,

This Dissertation

is

Respectfully Dedicated,

by

The Author.

On Abortion.

The reproduction of our species is one of the most important and interesting events connected with the history of our race, and is in strict accordance with the high behest of Deity himself, who has commanded us to go forth and "multiply and replenish the earth." Man, however, performs but a minor part in this work of reproduction, supplying merely the stimulus which imparts vitality to the germs of the future new being. To woman is assigned the glorious privilege of consummating the great work of procreation, by bringing into existence the perfectly formed creature in the image of its Creator. In view of this fact, nature has furnished her with organs peculiarly

adapted to the complicated part she is to perform in this important proces. The principal of these are the Ovaries, which furnish the germs of the future being — the uterus, in which it finds a safe lodgment, until it is prepared to enter upon a separate state of existence; and the mammae, which, after its expulsion from the Uterus, supply it with nourishment adapted to the feeble state of its digestive powers. But the beautiful precep by which the fruit of conception is retained and evolved within the maternal system until sufficiently developed to maintain a separate existence, is liable to frequent interruptions that may result in the severance of its maternal relations,

and its untimely expulsion from the Uterine cavity. When this untoward event occurs anterior to the seventh month, it is called an "Abortion," with which alone we propose to deal in the present paper. Abortion may occur at any time between the commencement of gestation and the end of the sixth month; and a late French writer M. Guillemot has described three varieties of Abortion, founded on the period at which the event may occur, thus — before the twentieth day he calls it ovular, up to the third month, embryonic, and after that to the close of the sixth month, foetal abortion. Whether this division of Abortion into varieties possesses any practical advantages in the general consideration

of the subject, we shall not now undertake to decide. That this accident is most frequent in the second and third months of pregnancy is, we believe, generally admitted, and is doubtless owing to the increased vasculanity of the ovum and its investments, and want of perfect firmness in its attachments. That, as its organization increases in maturity, and its attachments in firmness, the liability of its detachment is lessened, appears entirely consonant with reason.

Causes.

In considering the grave question of Abortion, it is natural that we should primarily endevor to ascertain the <u>Causes</u> that lead to so unfortunate a termination of the beautiful proces by which our species

is reproduced; and upon investigation, there are found to be so numerous that our astonishment is excited at the frequency with which the reproductive process is fully consummated. The determining causes of Abortion are divided into:

1st " The Internal or Spontaneous.

2nd " The External or Accidental.

3rd " The Provoked, or those which result from efforts made to secure the expulsion of the embryo.

1st " The Internal or Spontaneous causes of Abortion are: A - Such as originate in and are peculiar to the maternal system itself; and B - Such as appertain exclusively to the foetus.

A - Causes originating in and peculiar

to the female system. — Prominently among these, we may enumerate acute febrile diseases, particularly the exanthemata. In this class of febrile diseases the irritative action is so expressive that the uterus rarely fails to participate in it to such an extent as to occasion the expulsion of its contents. So also in acute inflammation of subjacent organs and tissues, such as the kidneys, bladder, intestines, peritoneum, &c., the uterus usually sympathizes sufficiently to bring about the same disastrous result. Syphilis is another prominent cause of Abortion. Indeed, the existence of syphilis in its fully developed forms, may be considered almost, if not entirely incompatible with the due performance of the functions of the impregnated uterus. Convulsive diseases, such as epilepsy, eclampsia, &c. may give rise to Abortion, as also

the existence of large tumors in the pelvic and abdominal cavities, which by pressure upon the uterus prevent its' proper development. In addition to the causes enumerated, we must not overlook those that are connected with the condition of the uterus itself, such as tumors within its cavity, or that have been developed in the substance of the Uterine walls; ulcerations, syphilitic or otherwise of the Os and Cervix uteri; displacements, such as prolapus, anteversion, retroversion, &c. But independently of the existence of positive disease, either local or constitutional, there are conditions of the female system, which may be considered as mere exaggerations of the Physiological condition, but which strongly predispose them to Abortion. Thus, women of very delicate organization, possessing great sensibility and irritability of the nervous

system, may abort from mere mental excitement, or other equally slight cause; so also women of a full plethoric habit, are liable, about the Menstrual periods, particularly after active exercise, to sudden sanguineous determinations to the Uterus, which may induce an Abortion.

B— Causes which appertain exclusively to the Foetus. — Some writers maintain that children during intra-uterine existence are sometimes destroyed by those acute diseases to which they are liable after birth. Whether this be so or not, it is undeniable that the diseases of the mother may be transmitted to the foetus in utero, and by destroying it become the immediate cause of abortion. It has been frequently ~~been~~ demonstrated that both Variola and Syphilis have been thus transmitted. In aged men or those

rendered prematurely old by dissipation and debauchery, although the semen may be sufficient to impregnate the ovum, yet the vitality imparted is of so feeble a character as to be insufficient to carry the foetus through the period of intra-uterine existence, and it consequently perishes from deficient vitality. Any cause by which the circulation between the mother and child is interrupted, must by destroying the child, inevitably terminate in Abortion: thus, torsion of the cord, or a preternatural shortening of the cord, or a cord that is tightly wrapped around the child's neck, may by rupture or pressure obstruct the circulation, and thus occasion death.

Diseases of the placenta, such as atrophy, hypertrophy, effusions of blood or abscepes in its

substance, are not unfrequently causes of Abortion. Some writers have claped Multiple pregnancies and large accumulation of the Amniotic fluid as causes of Abortion, by reason of the over-distension of the uterine walls to which they give rise.

2nd - External or Accidental causes. - These usually occur from the application of external forces, operating immediately upon the Mother, or through her upon the Foetus in utero. Of this clap, falls and blows or contusions are prominent causes, also lifting heavy weights, excepive exercise, either on horse-back or on foot, long continued fatigue, &c. In some women Abortion is so easily induced that even a sudden slip of the foot, without actually falling, may suffice to bring about that result, whilst in other cases, severe external violence may be sustained

without disturbance of the relations subsisting between the Mother and child.

3rd – Provoked Causes. – These are the means, mechanical or medicinal, used for the purpose of inducing Abortion, and can never be legitimately employed except in cases where, from vices of conformation, the lives of Mother and child would be imperilled by permitting gestation to proceed to the full term. In all cases of this kind it becomes the duty of the accouchur to resort to measures for the preservation of both Mother and child if possible, but at all events to save the Mother. Among these measures, the induction of premature delivery is perhaps the best. The various means used for inducing criminal Abortion will not be considered in this paper.

Symptoms.

The symptoms of Abortion are not in all cases equally well marked, either in character or severity, but vary with the causes which give rise to the accident, and the period of gestation at which it may occur. Thus, in the first few weeks of pregnancy the symptoms may not be more severe than those that accompany an attack of difficult Menstruation — the expelled ovum may escape observation, and the women may suppose that she has simply suffered from an exaggeration of the menstrual effort, consequent upon the temporary suppression of that function. At a more advanced period the symptoms are better marked, but still vary with the determining causes by which they are produced. Cases resulting from spontaneous causes, or in

other words, from abnormal conditions of the maternal or foetal systems, are usually slower in producing their disastrous effects, and are accompanied by a different train of symptoms from those that arise from the application of external forces. In the former class of cases, the morbid conditions which give rise to them do not seem to act directly upon the contractile powers of the uterus, but rather indirectly, by causing the death of the foetus, which thereby becomes a source of irritation, and excites the expulsive efforts of the organ. These cases are usually ushered in with feelings of languor and lassitude, coldness of the extremities, chillings alternating with flushes of heat, loss of appetite, occasional sickness of stomach, dejection of spirits, a sensation of

weakness or sinking at the epigastrium, pain in the lumbar region with a feeling of weight in the pelvis, irritation of the bladder and difficulty in passing urine. After these symptoms have continued a longer or shorter period, they increase in intensity. the lumbar pains become more severe, are intermittent in their character and extend to the hypogastrium – a discharge from the vagina, at first, perhaps, sanious in character, but speedily becoming sanguineous, is established, and soon the expulsive powers of the uterus are brought into action.

An examination per vaginum will now perhaps disclose the fact that the Os and cervix uteri are progressively dilating under the action of the pains – the membranes will perhaps be found protruding and becoming

tense with each pain – they finally rupture, and the case then usually soon terminates, by the expulsion of the contents of the uterus. In other cases the ovum is expelled entire, which is the more desirable termination in the earlier months.

In cases arising from internal or accidental causes, the symptoms may vary according to the nature of the accident, or the amount of injury sustained. Thus, a pregnant woman may meet with a severe fall, by which the attachments of the ovum are extensively separated. Immediately she finds herself attacked with profuse hemorrhage, violent lumbar and abdominal pains, and all the phenomena attendant on the expulsive efforts of the uterus are developed;

and these may continue unabated until the Os and cervix are sufficiently dilated to admit the escape of the ovum. Again, a woman may slip on the pavement, or lift a weight, by which she wrenches her back, or as she expresses it, "gives herself a twist," followed immediately by pains in the loins, which is soon accompanied by a slight sanguineous discharge from the vagina. The symptoms may continue for several days in so mild a degree as not to hinder her from pursu= ing her usual avocations, when suddenly, perhaps, after more than usual fatigue, the pains are greatly increased and extend around to the hypogastrium, whilst the discharge, which had not exceeded that usually ob= served in menstruation, becomes profuse, and

the case proceeds in the usual manner to its termination. In another case where the mother has received a violent blow or contusion upon the abdomen, the symptoms of an approaching Abortion may become imminent; yet after a few hours repose in the recumbent posture, or the use of a soothing treatment, these symptoms may all rapidly disappear, and the woman return to her usual employments. In a little while, however, she discovers that the movements of the foetus are neither so frequent or forcible as they had previously been. These movements continue to decline daily, till after an indeterminate period they cease entirely, and the death of the child is determined. The breasts speedily become flaccid, the sympathetic

disorders which accompanied the pregnancy now cease, and the patient congratulates herself upon the relief from these annoyances, which she experiences. In a few days, however, the symptoms of Abortion are renewed, and the contents of the uterus speedily expelled. This is the usual course in these cases; yet it is maintained by eminent writers, that the dead foetus may be retained in the uterus for an indefinite period, without ill consequences to the mother, the Abortion finally occurring after the lapse of some weeks or even months.

These descriptions afford a general history of the symptoms of Abortion, arising from a variety of causes. There may be cases in which some variation from the symptoms here laid

down may occur, but to enter into a detail of all the slight deviations that may be observed in symptoms attending this accident, would extend this paper to an unnecessary and inconvenient length. We shall, therefore, proceed to consider the

Diagnosis.

In the earlier periods of gestation the diagnosis of an approaching Abortion is by no means easy. However strong the reasons we may have for supposing that pregnancy may exist in any given case, it is now admitted that we cannot pronounce upon the case with absolute certainty before the fourth month, or until the pulsations of the foetal heart are perceptible upon auscultating the abdomen. All other known

signs may prove fallacious; and we cannot, in the first two or three months, decide positively whether the symptoms are due to uterine congestion or to an approaching Abortion; but, whilst we cannot, in these early cases, form our opinions with entire accuracy, we may, nevertheless, by a careful investigation of the history of the case, and of the phenomena presented to observation, form very probable conclusions as to its nature. Thus, a woman in the enjoyment of excellent health, and who has menstruated with perfect regularity, suddenly finds her catamenia suppressed without having been exposed to any of the usual causes of abnormal suppression. Very naturally, perhaps, she supposes herself pregnant, but after the

lapse of two or three months, with or without an appreciable cause, she experiences sharp lumbar and abdominal pains, attended by a discharge from the vagina, which upon examination is found to be sanguineous. Now, the important question arises, is the woman really pregnant, and are the symptoms due to an approaching Abortion, or is the patient laboring under uterine congestion, (caused by the suppression of the menses,) which nature is endeavoring to relieve by restoring the discharge? These questions we cannot answer with absolute certainty, and yet a proper solution of them is of vital importance. If, indeed, we can be satisfied that our patient is really pregnant, prompt measures

of depression should be at once adopted; whilst if we can be assured the symptoms are the result of congestion, consequent upon suppression, all proper measures should be resorted to, to aid nature in her conservative efforts at restoration. Now under these perplexing circumstances we must be governed by the information we obtain from a full history of the case, and the rational and sensible signs by which it has been and is accompanied. We have supposed the case to have occurred in a healthy woman, who is unconscious of any cause sufficient to have suppressed the menses, except sexual intercourse. Now if we find that those disorders of digestion which usually attend pregnancy have followed and accompanied

the suppression – if the breasts have become enlarged and tender, and the areolar circle and nipple have deepened in color, and the uterus is larger, settled down in the pelvis, and less moveable, we may rationally infer the existence of pregnancy. If the vaginal discharges have preceded the pains, which continue without mitigation, after they are fully established; if, upon a physical exploration we find the neck of the uterus dilated so as to admit the finger, which detects the presence of a soft, membranous tumor, which becomes tense and presses downward on the accession of pain, we have strong reasons for supposing that an Abortion is imminent, and should take our measures accordingly. When the pregnancy has advanced beyond the

fourth month, the difficulty of determining its existence is greatly lessened. In addition to the rational and sensible signs already enumerated, Auscultation - by enabling us to hear the pulsations of the foetal heart - affords us one that may be considered decisive in settling the question. But having decided the existence of pregnancy, and that the symptoms are those of a commencing Abortion, the important question arises whether we can, by treatment, arrest the symptoms, and prevent the Abortion? This is a question which is not always of easy solution. Cases which, in the beginning, did not appear to be very formidable, have been known (either from imprudence of the patient or from some internal

cause which has escaped observation,) to pro=
gress steadily to an unfavorable termination;
whilst others, of the most unfavorable
character, in which Abortion appeared
to be imminent, have by judicious treat=
ment been arrested, and the gestation pro=
ceeded to term. There are two circumstances
that render Abortion absolutely inevitable:
the first of these is the death of the child;
the second, so extensive a separation of
the placenta from the uterus that the re=
maining attachments are insufficient
to sustain the foetal respiration. To these
should probably be added a rupture of
the membranes and a discharge of the
liquor Amnii. This is, however, a disputed
question, yet it may generally be regarded

as certain to produce a Miscarriage. In all cases every effort should be made to arrest the progress of the symptoms, except in those above indicated, where Abortion is inevitable.

Prognosis.

This in regard to the foetus is necessarily fatal - it not having arrived at a period that will render it capable of sustaining existence separate from the parent. In relation to the Mother, so far as her life is involved, the prognosis is usually favorable - a fatal termination being rare, except in cases occurring in patients laboring under acute febrile diseases, especially those belonging to the exanthemata, or where the Abortion is

the result of violence, either accidental or induced. The complications greatly increase the danger. The prognosis also varies with the period of gestation at which the miscarriage occurs. Thus, in the first and second months, the attachments of the ovum being feeble, Abortion is effected with facility, and generally with such slight indisposition that the patient finds it scarcely necessary to keep her bed. In the third and fourth months there is more difficulty - an amount of contractile power being required to expel the foetus, to which the uterus, in its as yet undeveloped condition, is scarcely equal. The consequence is a prolongation of the process of expulsion, increased hemorrhage, &c.

The placenta also at this time frequently presents considerable difficulty in its delivery. In the fifth and sixth months the prognosis is less grave, the greater development of the uterus enabling it to expel its contents with less difficulty. But whilst the prognosis in Abortion — so far as immediate results are involved — is usually favorable, it is much less so in regard to ulterior consequences. A miscarriage predisposes to a repetition of the accident in subsequent pregnancies; and where it has been repeated three or four times, it is with the utmost difficulty its recurrence can be prevented. In its remote effects it is much more injurious to the constitutions and general health

of females than delivery at the full term. But what is of more grave importance than the considerations here adduced, is the fact, asserted by many writers, that frequent abortions lay the foundations for those chronic diseases of the reproductive system, which, in the latter periods of life, prove so disastrous to many females, rendering even life itself a burden.

Treatment.

The treatment of Abortion is three-fold in its character, and requires a resort:

1st. To such measures as may be proper to avert the accident in those constitutionally predisposed to it. Under this head also, we will notice the means necessary to arrest the symptoms

2nd " Such measures as may be necessary to facilitate the expulsion of the ovum in cases where Abortion is inevitable; and,

3rd " The measures necessary to meet accidental complications.

First. – In females constitutionally predisposed to Abortion, it usually occurs at a certain stage of the pregnancy, and consequently we have time afforded us in which to adopt measures for its prevention. To be enabled to act efficiently, we must inform ourselves of the causes which produce the disaster, and resort to such measures as are calculated to remove or render them inoperative. A habitual predisposition to Abort is usually occasioned by some vice in the Constitu=

tion of the female, or in the organization of the ovum. In the latter case we can have no previous knowledge of the cause, and are, consequently, powerless to avert its operation. In the former case we may, by a proper investigation, ascertain the particular vice, and employ the proper remedies for its correction. The limits of this paper will not permit a reference to the treatment necessary to correct all the vices of constitution that may produce Abortion. A notice of two or three classes of cases is all that will be attempted.

In females of a full, plethoric habit of body, who are subject to periodical determinations to the uterus, it becomes necessary to resort to measures of an antiphlogistic

character. A restricted and cooling diet is among our most important remedies for the reduction of plethora. Constipation should be obviated by injections of a cooling and demulcent character. An occasional use of the lancet, aided by the cold hip-bath, will usually suffice to prevent those periodical congestions to which we have before alluded. In addition, the patient should carefully avoid all causes of excitement, or that produce fatigue; and she should rigidly confine herself to the horizontal posture for several days before and after each menstrual period.

In women of a pale, anaemic habit, attended by a relaxation of the tissues and general debility, an opposite course

of treatment will be necessary. The same attention to the bowels, and the same avoidance of all causes of excitement or exhaustion, mental or physical, should be observed; but these should be accompanied by such remedies as will restore the powers of the system and improve the condition of the blood. For this purpose we should allow the patient a generous and digestible diet, which should be aided by the cold bath, and a tonic course of treatment, embracing more particularly, the preparations of Bark and Iron. Should there be an irritable condition of system, a resort to anodynes will be necessary. As the stage of gestation

approaches at which the Abortion usually occurs, additional care should be observed, and the patient should remain quietly in bed for ten days or two weeks before and after the dreaded period. In Syphilis and the various forms of cacheylic diseases, the remedies appropriate to these several conditions should be persistently employed. In all cases where Abortion has occurred frequently the uterus should have rest, and with this object in view, the woman should, for a couple of years at least, carefully avoid all chances of becoming pregnant, by secluding herself from her husband - And where pregnancy has occurred, sexual intercourse should be strictly avoided during its continuance.

But- Should all means of prevention prove unavailing and symptoms of Abortion make their appearance, measures should be promptly adopted for their arrest. The patient should at once be confined to a recumbent posture, and kept in a perfectly quiescent state. Opiates should be administered every hour (or oftener, if required by the exigencies of the case,) and continued until pain and hemorrhage are relieved. These measures should be aided by the application to the abdomen, of compresses wrung out of cold water, which should be fre= quently renewed. If the patient be plethoric, venesection should be premised, or if circumstances forbid its use, or the plethora

be local, leeches or cups to the upper portions of the body and revulsives to the thoracic extremeties may be substituted. She should have cold, acidulous drinks, and a light, unirritating diet. These measures usually suffice to arrest the progress of a commencing abortion, unless the foetus is already dead, the membranes ruptured and the waters discharged, or the placenta so extensively separated from the uterus as to render it incapable of sustaining the foetal respiration. In these unfortunate cases, Abortion becomes inevitable. This brings us to consider:

Secondly. — The means necessary to facilitate the expulsion of the ovum. In cases of inevitable Abortion the sooner

the uterus is relieved of its contents the better for the patient. Yet if the symptoms are not of a character to compromise the safety of the patient, the physician should observe a "masterly inactivity". He should carefully watch the progress of the case - keep his patient quiet and cool, and by a cheerful countenance and encouraging language endeavor to sustain her spirits, trusting all the while to the efforts of nature for her relief, yet ever holding himself ready to aid nature should such assistance be required.

But if the progress of the case be tardy - owing to the inefficiency of the contractile efforts of the womb - and the hemorrhage such as to imperil the safety of

the patient, prompt interference becomes necessary, and here the treatment will be somewhat modified by the period of gestation at which the accident occurs. During the third and fourth months the hemorrhage is usually more profuse and the expulsive efforts less efficient, owing to the contractile powers of the uterus being yet feeble. Under these circumstances efforts should be made to arouse its contractility by the administration of Medicines. Among other articles suggested for this purpose, the tinctures of Canella and Cimicifuga, and Ergot, in powder or decoction, have each had their advocates - the latter, however, is now admitted to be the only reliable agent, and

should be at once administered. Should this fail in procuring the expulsion of the ovum, and the hemorrhage continue threatening, resort may be had to the tampon, with an assurance of almost certain success, for by its use we can control the hemorrhage with much certainty, whilst its presence, by irritating the neck of the uterus, promotes dilatation and stimulates contraction. During the fifth and sixth months — owing to the increased development of the muscular structure of the uterus and the consequent increase in its contractile powers - the os and cervix are dilated with greater facility; and as the attachments of the ovum have acquired more firmness, there is usually much less hemorrhage, and the

case proceeds with more regularity to a favor-
able termination. Should the exigencies of the
case, however, require active interference, we
may, in addition to the use of Ergot, rupture
the membranes and discharge the liquor
Amnii. These measures are ordinarily suf-
ficient to bring the case to a successful termina-
tion; but should they fail, we must then
employ the tampon, by which the urgent Symp-
toms may be controlled, until the womb is
in a condition to throw off its burthen.

Thirdly. - Measures necessary to meet ac-
cidental complications. - The most important
of these complications, are hemorrhage and
retention of the placenta. The treatment of
the former having been adverted to under
the preceeding heads, we shall here simply

recapitulate. In those cases where, from the moderate character of the hemorrhage, we may hope to arrest the progress of a miscarriage, rest in a recumbent posture, the exhibition of opiates, and cold compresses over the abdomen are usually sufficient; but should they fail and Abortion become inevitable, then recourse must be had to Ergot, and if necessary the tampon. During the fifth and sixth months, in addition to the measures here indicated, we may rupture the membranes with every prospect of its being advantageous in arresting the hemorrhage. This measure is not advisable at an earlier period of gestation, as it is usually followed by the immediate expulsion of the foetus and contraction of the neck of the womb,

by reason of which the delivery of the Placenta and membranes would be rendered much more difficult.

Should the hemorrhage occur in consequence of inertia of the Uterus, subsequent to its complete evacuation, it will be proper to irritate the uterine neck by titillating it, at the same time using frictions over the hypogastrium and electro-galvanism, with the hope of producing its contraction. These means failing, we must resort to Ergot, and if necessary to the tampon. In cases where the patient has been much exhausted by loss of blood, it will be necessary to resort to the internal use of Stimulants, such as wine, brandy, &c. It is also very important to pay attention to the temperature of the extremi=

ties, and if they fall below the natural standard, must be restored by applying counter-irritants or artificial heat.

Retained Placenta.

In the first two months the ovum usually escapes entire, and the placenta is rarely retained. In the third and fourth months, however, although the contractions are not powerful enough to break up the utero-placental adhesions, they are, sometimes, sufficiently so to rupture the membranes and discharge the waters, when the foetus is expelled almost immediately. The placenta, still adherent, does not follow — the uterus retracts and the neck closes up, and we have to deal with a case of retained placenta. Now, if there be no hemorrhage

and the patient is comfortable, we must watch her closely, but refrain from active interference. The placenta and membranes may be retained for days without inconvenience or the appearance of any untoward symptoms. Sooner or later, however, there is some return of pain and a bloody discharge from the vagina; and these continue to increase in intensity until the suffering is considerable and the hemorrhage abundant and threatening. Upon examination per vaginum, we shall probably find the os somewhat dilated and the placenta presenting. If the contractions have been sufficient to entirely separate the placenta, we may perhaps be able to extract it with the fingers or with forceps. It will be improper to use much force in the extraction, as the placenta might still be ad-

herent, and we should possibly tear off the presenting portion, whereupon the neck might reclose itself, and the original difficulty be re-produced. By placing one hand over the abdomen and preping the uterus firmly downward, we may now probably be able to reach the interior of the uterus with the finger of the other hand, and separate its attachments. Should we fail in this, and the hemorrhage continue abundant, we must resort to the tampon and administer Ergot. But in some cases the uterine neck remains closed, and putrefaction of the retained placenta and membranes rapidly ensues. In this deplorable condition of affairs, the os and cervix remaining firmly closed, we cannot relieve the uterus of its festering contents by artificial delivery. Ergot may be tried, but should it fail, we must

then content ourselves with endeavoring to sus-
tain our patient until the whole decomposing
mass is thrown off by the natural procesps. The
patient should be put upon a supporting and
nutritious diet, with stimulants, and tonics, such
as quiniae, Huyhams tincture of bark, or the mineral
acids - and anodynes and nervous stimulants may
be necessary to allay irritation and secure sleep.
The bowels should be kept open by enemata, and
the uterus and vagina should be frequently
washed out with detergent and disinfecting
injections. Patients may by these measures oc-
casionally be saved, but more frequently will
succumb to the continued irritation and the
depreping effects of the absorbed matters.

It was the original intention to embrace
in this paper a description of the means necpasy

to induce Abortion in those unfortunate cases where deformity renders it essential to the safety of the mother. But as the induction of labor is rarely required until after the sixth month, and this paper has already been extended beyond the limits originally prescribed for it, the author will now bring the discussion of the important subject treated upon to a close.

John M. Beckenbaugh

INAUGURAL DISSERTATION

ON DIGESTION

Submitted to the Examination of the

ons. Regents, and Faculty of Physic.

Of the University of Maryland;

FOR THE

egree of Doctor of Medicine:

BY

Edgar D. Robertson,

OF

Digestion

In order to comply with the demands of the Faculty of the University of Maryland, namely - in handing forth a thesis - I have chosen for my humble mediating the theme of digestion; which process may be considered as constituting the base of all health, strength, action; and even the radical of animal existence.

Properly speaking digestion may be defined to be that process by which the various foods are reduced to a form capable of being absorbed from the intestinal canal & taken up by the blood vessels. In vegetables this process is extinct; for they derive their nutrition from air & a supply of inorganic matter.

as water, saline matter, carbonic acid and Ammonia. Man on the other hand being a complicated piece of mechanism is supplied with an apparatus termed the digestive or "Alimentary Canal". This tube extends from mouth to Anus.

It is composed of several cavities combined which differ in form and function. Man could dispense with this canal if his structure were of a simple nature as the vegetables capable of absorbing from external objects sustenance sufficient to live; but God has created him in His own image endowing him with a subtle substance termed the Soul which must live in the coming World; after inorganic life shall have buried itself in oblivion. The subdivisions of the

"apparatus"

are termed respectively the Mouth, Pharynx, Oesophagus, Stomach, Small intestine which has three subdivisions; namely— the Duodenum Jejunum, & Ileum.— Also a large intestine which is divided into— the Ascending, Transverse & Descending Colon. Sigmoid-flexure, Caecum and Rectum; which latter is provided with a double sphincter. Next in order are the accessory organs, as the Liver, Spleen, Gall-bladder, and Pancreas; Kidneys: and the Teeth, Salivary glands and Ducts.

The Salivary glands are three pairs, constituting five glands in the whole. First in order are the Parotid with 2 in No: Secondly the Submaxillary 2 " " and thirdly the Sub lingual 1 " "

This tube is Musculo-membranous in

structure being about (30) thirty feet in length: It's whole course is lined with a mucous membrane, which serves to lubricate the passage of the various ingesta downwards:- During its obeisance to the laws of Contraction and Gravitation- It is also provided with a muscular coat with circular and longitudinal fibres The teeth are thirty two in number. They are three molar 2 Bi-cuspid, one canine and two incisors. The upper Canine is termed eye-tooth; the lower the Stomach; -probably from the long fangs they presents.- A hollow cavity is situated at the upper base of each crown, and is continuous with the canal which traverses the fang to its root. This is termed the tooth cavity.

which contains a highly vascular and sensitive substance termed the pulp. This pulp is richly supplied with vessels and nerves which enter the foramen at the root of the tooth. The salivary glands come next to be noticed. First in order is the Parotid. This is the largest of the salivary glands; weighing from half ounce to one ounce. It lies upon the side of the face immediately below and in front of the external ear. The saliva is conveyed from this gland through Steno's duct, which measures about two inches and a half in length. It commences from the inner side of the upper jaw opposite the second molar tooth; by a small orifice running for a short distance between the mucous membrane and their

passing the Incisivator muscle crosses the Masseter to the anterior part of the gland. Next to our consideration is the sub-maxillary Gland, the weight of which is about two drachms; is situated beneath the lower jaw in the anterior-inferior axillary triangle of the neck; being separated from Parotid by style maxillary ligament. The saliva is conveyed to the mouth from this gland through Wharton's duct. This duct is about two inches in length, commencing by a small orifice on the summit of a small papillae near the frenum linguae passing backwards and beneath the gustatory nerve to the deep portion of the gland where it bifurcates into its substance. The sublingual being the next and

final

one in view, is the smallest of the three pair. It is situated beneath the mucous membrane of the floor of the mouth, on either side frenum linguae in contact with the inner surface of the lower jaw. The duct related to it is termed the duct of Bartholin. These glands are conglomerate: consisting of numerous lobes, which are made of several smaller lobules: connected by dense areolar tissue, vessels and nerves. The mouth is bounded on either side by the cheeks: in front by the lips; behind by the soft palate and fauces; above by the hard palate and upper teeth; below by tongue and teeth of the lower jaw. Thus we have described the boundary of that portion of the tube termed the mouth. The first process of digestion is termed

prehension. Little has to be described; it being merely a physical function, but not chemical. The next process is termed mastication and insalivation. The food being now in mouth undergoes a grinding process between the teeth - by contraction of the facial muscles, being simultaneously moistened by the saliva, until deglutition can be accomplished in the case. Now if this function has not been properly exerted before coming in contact with Stomach digestion, give very much trouble at times by its half mangled condition exhausting the milky churning powers of the stomach & we often experience gastric uneasiness sometimes termed dyspeptic colic. The saliva is an alkaline secretion with

a specific Gravity of 1003. The Saliva is frothy. Its flow is scanty during the absence of food or natural stimuli. The composition I quote from Prof. Dalton's Physiology

Composition

Water	995.16
Organic Principle	1.34
Sulpho-cyanide Potassium	0.06
Phosphate of Soda lime and Magnesia	.98
Chloride of Sodium and Potassium	.84
Total Amount	1000.00

From the above statement we perceive that this substance consists of 995 parts per thousand, the remainder being its organic matter a few of the salts and a minute portion of epithelium. Its organic

principle is termed Ptyalin; hence we have Ptyalism when it is in excess. Ptyalin is coagulable ~~by~~ in alcohol; but not in a boiling temperature. The Saliva is not a simple secretion but each pair of glands possess a fluid of different chemical nature. The Parotid-saliva is thrown out per "Stenos Duct". This is an alkaline transparent and limpid fluid, without the slightest viscidity. The Sub-maxillary contains a well marked degree of viscidity and is also slightly alkaline. The Sub-lingual contains more viscidity than the last mentioned Secretion. The buccal Secretions are very slight, but possessed more viscidity than any of the above named Secretions.

The Saliva possesses a marked influence over Starchy substances.
Experiments have shown that Starch taken in the Mouth is readily converted into Sugar and afterwards into Sugar.
It has been entertained by some and believed now to be the conclusion that the true function of the saliva is physical, but not chemical. Again experiments have shown that on the suppression of the Saliva digestion suffers only in the act of deglutition. Water would answer the purpose: but were blessed with these little springs at the sides and regions of our Mouth, thus relieved from the constancy of sipping fluid at each mouthful. Having finished Mouth-digestion; namely

that of mastication and insalivation we proceed to "Pharyngeal digestion". The pharynx is situated behind the nose, mouth and Larynx. It is about four inches in length; being limited above by the basilar process of the Occipital bone, below it is continuous with the Oesophagus. It has seven openings Communicating with it. The posterious nares two in number, the two eustachian tubes, mouth, larynx and oesophagus. It Consists of three coats, a mucous, muscular, and fibrous. The fibrous may be termed the Sub-mucous coat being situated between muscular an mucous. Oesophagus is the membranous canal situated between the Pharynx and Stomach. The function of the

The function of the two above named cavities, is purely physical but not chemical. The food being thoroughly masticated and insalivated is formed into a soft bolus which being pressed upwards by the efforts of the tongue and meeting with resistance in front, above and below is made to glide backwards: the little sentinel-nerve at the fauces simultaneously receiving the impression of coming force, suddenly closes the epiglottis; the soft bolus glides over to its destined cavity and obeying the action of the circular coating coating of the oesophagus and the laws of gravitation, presses downwards to the stomach. The stomach is the principal organ of digestion, being the most dilated portion of the

"Alimentary Canal". It is similar to the other portions of the tube in structure, being muscular membranous and fibrous in structure. The food after passing the Pharynx is beyond the control of the will, and having now gained the Stomach digestion is carried on by the contraction of the involuntary muscular fibres. In the Stomach the food undergoes a churning or triturating process through the media of the gastric juice and the peristaltic movements of the Stomach. The former function is chemical; the latter merely physical. The food passes from right to left and vice versa in the Stomach during the churning process. Albuminoids are

the only substances digested in the stomach. The amylaceous oleaginous and saccharine substances being merely hydrated, more or less. One of the greatest aids to digestion is the mucous membranes of the stomach. The stomach contains a supply of small glands which secrete the juice termed peptic glands. The gastric juice is a very important chemical agent in the process. Its Composition, is as follows,

Water	" "	975.00
Organic Matter	"	15.00
Lactic acid	" "	4.78
Chloride of Sodium	"	1.70
Chloride of Potassium	"	1.08
" " Calcium	"	0.20
" " Ammonium	"	0.65
Phosphate of lime	"	1.48
" Magesia	" "	0.06
" " Iron	" "	0.03
Total		1000.00

: or held in Solution

The most important substance after Lactic acid, is its Organic Matter termed Pepsine. It solidifies in Alcohol. As I have said the Stomach is incapable of digesting any aliment save Albuminoids. Whites of eggs are readily ~~taken up~~ and dissolved. In wheat bread the gluten is dissolved; the Starch only hydrated or gelatinized. In milk the Caseine dissolved; but the oily portions are only set free. The Albumen is changed into a substance known as Albuminose. Now something as regard the temperature for proper Digestion. The mean degree is abut 100° Fah, and any deviation from that point interfers with the healthy function. 160° Fah. checks

it; as does 32° Fah. The former proves irritant, causing a temporary congestion which interferes with secreting power by producing a distension of the blood vessels: and the latter by its direct sedative influence on the secreting function. For digestion to be forwarded harmoniously, there are numerous hygienic rules to be adopted. We require rest after meals - say 1 hr or two -; but what is the appropriate rest? Is it as the Spaniard viewed it: after a hearty meal laid himself down to repose, and awoke up unbenefitted, with a confused encephalon and gastric uneasiness. A little light reading and pleasant conversation promote it. Americans are generally regardless of the hygienic rules

indigestion. For they are often found to be fast eaters, attended with melancholy. Where our mind is perplexed with every day affairs, digestion suffers. Love, joy, hope. &c aid it: whilst fear, Anger & grief derange it in a measure. These though apparently trivial in character may lead to great obstacles. A rich and nutritious diet should be duly considered. When there is too great a quantity of food taken in, and it being of the same kind difficult to digest the Stomach suffers from it. The churning powers being exhausted in a measure; the food finally passes through the Stomach into the duodenum in a crude state. The quantity of Gastric-juice poured out is in proportion to the want of nour-

ishment by the system and not in ratio to the quantity of food taken in. Some of the most digestible substances that are obtained from the nutritious kingdom, are peas oysters. beef and milk, milk being the most nutritious agents we have in our reach. It is the only agent we have capable of supporting man alone. It consists of Car. Hyd. Ox and Nitrogen. all the necessary elements for the forming of Animal tissue. Decayed vegetables are injurious to the system; instead of cooling the system as it is their nature to do in the round state, they create free acid in the Primae viae which tend towards Gastritis or Gastro-enteritis. Coffee and tea each contain a substance known as Theine which prevents the waste of tissue in some degree; this being

applicable to the sick. (Now these substances are converted (in the stomach) into a substance known as chyme, during the process of the churning and trituration going on in the stomach. After a few hours the chyme which was formed in stomach digestion passes downwards to small intestine.

We now endeavour to describe the small Intestine in a rudimentary manner. They are composed similar with stomach of three coats, Mucous sub-mucous, muscular and Serous. It has scattered over its surface numerous glands. They are the solitary glands, or Glandulae solitary. Agminate or Peyers patches - Simple follicles, and the duodenal glands.

It also contains epithelium, valvulae conniventes and villi. These villi contain lacteals which

sucks up the chyle from the viscera of digestion — were discovered by Asellius, per chance in opening a dog July 23d. 1662. The valvulae Conniventes are reduplications or foldings of the tunicous and submucous membranes, containing no muscular fibres. The use of these valves are to retard the passage of the food downwards in a measure. thus affording a more extensive surface to absorption. The use of the secretions of the simple follicles or tubular depressions in the canal, is unknown. We also have Brunners Gland which function is unknown. The Solitary glands come next in consideration. Their use is not known. They form together in numerous masses in some portions of the intestines and are then termed Peyers glands generally supposed now to belong to

the lymphatic system. We have also the Liver to be taken in view. It supplies us with bile; which in company with the Pancreatic and intestinal secretions forwards digestion. The kidneys are simply the depurative agents; not aiding the simple process of digestion, but the nutritive at large, expelling the excrementitious substances from the blood. We have described that portion of the Alimentary canal termed Small intestine and various organs connected with it, which proceed to digestion at large in that portion. The substance termed chyme which was formed in the Stomach by the mingling of the gastric juice; and also the Amylaceous, Albuminous & Saccharine substance all pass into duodenum.

Here the substances which did not undergo digestion thoroughly in the Stomach assume a different consistency. They become changed and dissolved more minutely in the presence of the Pancreatic and biliary Secretions. The bile is obtained from liver through the common duct. On passing from gall-bladder the ducts from substance of liver, the former being termed "Cystic duct" the latter the hepatic. both converge on their passage downwards in a duct known as the "Ductus communis choledochus"; and this again united with the Pancreatic ends in the small intestine, at a little papillae near the middle and inner side of duodenum. The food now having passed the Common Choledoch duct is ready

for absorbtion, for the chyme and other portions have been duly emulsioned. The little absorbant glands now partake of the nourishing fluid; of which they drinks to the dregs. It sucks it forth and takes it along its tube to the "Receptaculum Chyli" is ushered up in the Thoracic duct against the laws of gravitation - proceeds to left sub-clavian vein to become the great nourishing and stimulating agent the blood. After passing the lungs it becomes good blood.

The Composition of the Pancreatic Secretion

Water "	900.76
Organic mat.	90.38
Chlo. soda.	7.36
Free soda.	0.32
Phos of soda	0.45
Sulp. " Soda	0.10
Sulphate Pot.	0.02

Combinations of

Lime	0.54
Magnesia	0.05
Oxide lime	0.02
Total	1000.00

Pancreatine is its organic substance ~~termed~~ much more abundant than the active matter of any other alimentary secretions. The starchy and saccharine matters are digested in this fluid as well as the oleaginous, and absorbed probably in the form of cane sugar through the "Venae Portae." We now have the Large-intestine extending from ~~mouth~~ ilium to anus. It has an ascending, transverse and descending portion, sigmoid flexure, Caecum and Rectum; which is as before said provided with a double sphincter. In structure it is similar to small intestine; having a mucous, submucous, muscular and serous coat. The muscular fibres proceed in a different dir-

ection. A set of circular; and a set of
longitudinal fibres. The mucous mem-
brane is grayish in color in the Caecum and
Colon. It presents in the Rectum three or
four permanent folds, which serve to
retain the faeces until a favorable op-
portunity presents for its expulsion.
It also contains a few "Solitary-glands."
The large-intestine serves as a trench to
the system; collecting and expelling the
foul matter termed "faecal matter". The of-
fice of the contents of "Primae-viae" differ from
that contained in Large intestine. The
former are intended to be absorbed from
the canal that life may exists; the lat-
ter require to be ~~absorbed~~ expelled that we
may have life and health. It is there-

fore requisite - that the former should be present, and the latter absented. The best time for stool is immediately after the morning meal: being upon the principle that one nail drives out another. The substance in both faeces is the refuse of the system and the remainder of the secretions which have not been re absorbed from "Primae Viae". The secretion of the small intestine is intended to facilitate the movements of the food and promote its absorbtion: the large intestine for its expulsion downward and outward. There are some other matters thrown out in the form of faeces beside the refuse of digestion. They are Excretine and Stercorine. Excretine is alkaline - crystallizable - and insoluble in

no water; but soluble in ether and Alcohol It fuses at 204° Fah. burning at a higher temperature. It is non-nitrogenous. The other substance is termed Stearine, which was found to be a part of the human fæces by Prof. Austin Flint — now Prof. of Physiology —. Soluble in ether and at boiling a temperature. It crystallizes in the form of radiating needles; but fusing at a higher temperature. Besides these the fæces contains an amount of fat and fatty acids. After all the function of digestion is forwarded by two General processes termed Secretion and Contractile power. Thus we finish that portion of Medical-Science pertaining to the structure of the Great-centre hibe of man and the assimilation of the various food stuffs in under the General head of digestion

AN

Inaugural Dissertation

ON

Dropsy

SUBMITTED TO THE EXAMINATION

of the

Provost, Regents and Faculty

of

PHYSIC,

of the

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

Doctor of Medicine,

by

William V. Mills

of

Virginia.

Session 1865-66

Hydrops

This is a disease characterized as its name puports in this by a preternatural effusion of water or serous fluid in the cellular tissue or by mechanical endosmosis into the natural serous cavities of the body.

It is divided under several heads according to the locality which it occupies

We shall first consider in a very humble manner ascites (askos a leathern sack) hence enlargement of the abdomen which takes place from below upwards as the effusion is poured out within its walls, distending enormously sometimes as I have seen causing a great deal

a uneasiness to the patient by the weight and fulness of the part; if the patient changes his upright position to that of the sitting the fluid is soon diffused by the action of gravity leaving of course no tumor.

Fluctuation is produced by manipulation and there is a flat sound on percussion; as the disease advances towards an unfavorable issue the abdominal viscera being encroached upon by the superabundance of the fluid becomes so obstructed in their respective situations that they are thereby prevented from performing their wonted functions with their usual freedom.

now it begins to oppose the actions of the Diaphragm and it becomes obstructive to the patient in the recumbent attitude the superior portion of the abdomen now becomes inflated so to speak, and the ribs and costal cartilages are forced outwards, it is now difficult for the patient to breathe respiration being thus disturbed the patient is consequently wearied and exhausted by the superadded work restlessness anxiety and want of sleep occur which end in delirium coma and death if the patient is not relieved by the proper treatment ascites may be mistaken for

Tympanites or pregnancy Tympanitis is known by a clear resonance on percussion, by the absence of fluctuation, and lastly by the oedema of the lower extremities which we have in ascites.

Pregnancy is known by the enlargement of the mammary glands the patient having generally very good health, and the os uteri is more effected in dilatation, the form and position of the uterus being pretty well marked by a tumor which it forms as the patient lies supine the muscles being at this time relaxed, while in a dropsical patient the muscles are

tense the health is impaired the countenance sallow general appear-ance emaciated the mammary glands, are soft and flabby the abdominal muscles are distend-ed in pregnancy and there is dul-ness on percussion over the uter-us; in dropsy if the patient is supine there is a tympanitic sound over the umbilical region on account of the floating of the intestines in the serous fluid, at the sametime there is a flatness on percussion over the part corresponding to the gravitated serum near the dor-sal region, if the patient be now made lie on her belly the tym-panitic sound will disappear

from the umbilical region and ap
-pear towards the dorsal region
in a word these objective sounds
will interchange with the two
positions above alluded to.

Treatment — Depletion
general or local as the physici
— an may judge the most expe
-dient or he may practice both
to advantage according to the
organ principally affected,
the condition of the pulse being
the gauge by which he is to be gov
-erned. the preparations of mer
-cury and antimony being
highly indicated to increase
the secretions and subsequent
-ly the mercurials combined

with opium pushed so far as
to affect the mouth the diaphore
-etics, and diuretic agents be
-ing now employed; of the latter
bitartrat of potash being high
ly recommended by Dr McSherry
of this University and is no doubt
a sovereign remedy, with this
digitalis, infusion of scoparium
squill: the preparations of pot
ash - turpentine, and if the
patient be of a gouty diathesis
colchicum may be effectively used;
of the diaphoretics Dover's powders
chamomile hot-diluent-drinks
&c. Hot water baths may be used
to relax the skin causing generally
a copious flow of perspiration, a

rubbing of the limbs and back. It seems to me to be of some value or anything of this kind to restore the functions of the perspiratory glands and ducts most-in order I should give purgatives and especially those hydragogue cathartics which would eliminate the watery effusion from the parts affected; of these Cl. Tiglii, Elaterium, Jalap and others I might mention; I will however mention the sulphate of magnesia which is found in almost every family, the action of this medicine is peculiar from the great affinity that the sulpheric acid (SO_3) has for the water (HO) the HO is attracted to the SO_3 and the

...agnosia taking advantage of this
great intimacy takes them both out
of the system for one, if the system
becomes too much debilitated by
the latter series of remedies we must
resort to tonics which have a tend-
-ency to build up the system, the
best of these are the Salts of Iron,
Quinine, and the other bitter tonics
are very much demanded if the
patient complains of anorexia
Paracentesis is highly useful if
the distension cannot be reduced
otherwise I have seen remarkable
relief given to patients at the
Infirmary of this college by a
large bandage placed around
the abdomen after the operation

magnesia taking advantage of this great intimacy takes them both out of the system per anc. If the system becomes too much debilitated by the latter series of remedies we must resort to tonics which have a tendency to build up the system, the best of these are the Salts of Iron, Quinine, and the other bitter tonics are very much demanded if the patient complains of anorexia Paracentesis is highly useful if the distension cannot be reduced otherwise I have seen remarkable relief given to patients at the Infirmary of this college by a large bandage placed around the abdomen after the operation

of paracentesis. I believe much re-
-lief may be given to patients by
this mechanical support even in
the commencement of the disease.

Causes — From the fact that
the great serous sack the Peritoe-
-eum contains so many and im-
-portant organs, this kind of
dropsy is the most frequent,
any obstruction of the large
vessels such as of the portal vessels
is a fruitful source of the disease.
Pregnancy is often the cause, a
suppression of perspiration or of
the catamenial discharges or a
disappearance of the catamenia,
it may also be occasioned by an
exhausted debilitated system

from Diarrhoea or dysentery or it
may be a sequela of remittent
or intermittent fever. We have a
case now in the Infirmary from
the latter disease. It may arise
from organic lesion of the liver
or system from the suppression of
a chronic eruption of the exan
-themata, as from erysipelas scarla
-tina variola or from excessive
hemorrhages. To speak multum
-in-parvo, dropsy is caused by
any impediment that the venous
blood may meet with in returning
to the great centre of circulation.
Hydrothorax. — Dropsy of the chest.
This consists in an effusion of se
-rum in one or both of the pleural

cavities.

Symptoms. There is a great weight and fulness on the side affected, with dyspnœa the patient generally lies on the side affected to rid himself of the weight of serum pressing upon his lungs, he will instinctively lie on that side, when the fluid occupies both sides the patient is obliged to set up to facilitate breathing and the countenance feels an appearance of anxiety, and great distress, the intercostal spaces become much enlarged and the surrounding integuments become oedematous frequently the upper extremity of same

side partakes of this condition
Physical Signs – A percussion
be made on the side which con-
-tains the fluid a flat sound
will be produced the fluid
will gravitate to the most de
-pendent part and will change
position according to the attitude
of the body, we may diagnos
-ticate between this effusion
and the hepatization of the
pulmonary organ by observing
the following signs – the lungs always
maintain their position whatever
may be the attitude of the body are
always dull on percussion in
the hepatization. In effusion
we have no respiratory murmurs

but-have the Bronchial respira-tion substituted in its place. Egophony is sometimes heard when the effusion is only par-tial. Mensuration is very useful when the effusion is confined to one side but com-paring the sides with each other by inspection and the enlargement of the intercostal spaces will be sufficient to form a correct diagnosis.

Treatment Take away the cause and the effect will cease, it may be caused by organic disease of the heart or from inflammation of the pleura.

Tuberculosis or a wound

penetrating the chest. Diuretics diaphoretics and cathartics are indicated; for debility in this disease from any cause the tonic remedies must be called into play.

Paracentesis thoracis is sometimes practiced in empyema.

Hydrocephalus (Hudor & Kephale)

This is an effusion of serum into the cavity of the cranium.

Symptoms. Loss of appetite all the excretions are changed in properties the patient has also drowsiness restless sleep, pains in the head with giddiness, the patient becomes silent irratable and indifferent

to surrounding objects, we have chills flushes pulse very quick and strong. The disease may come on from whooping cough, remittent fever, scrofula or the exanthemata. It has been divided into three stages Viz 1st great sensibility 2d Diminished sensibility 3d Palsy or convulsions. This disease as has been lately agreed upon by author's is better known by Tubercular meningitis as the pathological Anatomy discover's an inflammation of the arachnoid membrane and of portions of the brain with softening of this organ and effusion, this

disease is most liable to occur dur-
-ing infancy or childhood especial
-ly when there is a strumous
diathesis present. Disorders of
the respiratory or digestive or-
-gans difficult dentition scar-
-latina or any debilitating dis
-ease will bring on this affection
external violence to the head
or a repression of sudden dis
-charges as old sores may bring
on the disease.

Treatment. Bleeding
locally and generally purga
-tives such as calomel and
jalap, the application of cold
to the head and Mercury as
an alterative have been used

with good results. Vesicles are highly recommended and as palliatives. Digitalis squill antimony opiates; the diet should be very mild.

Chronic Hydrocephalus.

This is either acquired from the acute or congenital from some malformation of the brain. We have enlargement of the cranium when the bones are separated at the sutures by the fluid within and the fontanels are enlarged giving great weight to the head.

Symptoms - When the disease comes on subsequent to infancy we have unusual excitabil

-ity of the nervous system exces-sive muscular debility, epileptic fits are apt to occur heaviness and pain in the head; by pressure on the fontanels we may produce stupor, the pupils of the eyes become enlarged and frequently the senses of taste and touch may alone remain, there is debility and loss of power in the voluntary muscles with autonic motions of the limbs, there is an inclination to keep the head lower than the body as buried in a pillow.

Treatment. We may resort to diuretics diaphoretics and

purgatives together with mercu
rials tonics and strength
-ing diet. Tapping has been
recommended.

Anasarca. This is an effusion
of serum in the meshes of the
cellular tissue, it is well known
by its doughy resemblance in
pitting as soon as the parts
are pressed upon by the fingers
&c. &c. It may arise from
exposure to cold, to suppressed
perspiration, it more frequent
-ly arises from the repelled erup
-tions after scarlatina and
measles, from Bright's disease,
from disordered menstrual se
-cretions, from organic disease

of the heart, from intermittent
fevers, from obstruction of the
circulation, from any cause; as
in ligatures or from inflam
-mation as phlegmasia dolens
frequently occuring in fe
-males and it may occur
from long continued use
of arsenic of which latter
fact I have an example
in myself

Treatment. If the dropsy
arises from anæmia one
must strengthen the patient's
system by tonics nutritious
food, fresh air, and other
hygienic rules, if from dis
-ease of the kidneys [illegible]

must be applied over the
loins formed by cathartics
warm baths diluent drinks
we may resort to Potasse
Bitart and Digitalis we may
resort to bandaging and
pricking the thighs with
needles, allowing the serum
to exude.

Hydrocele. This is a tumor
formed by an accumulation
of fluid in the cord or within
the Tunica Vaginalis of the
scrotum. It is distinguished
from Sarcocele by the weight
and density of scrotum in
Sarcocele while Hydrocele is
known by the fluid collecting

from below gradually extending upwards, and Hydrocele is translucent and fluctuating to the touch. It is distinguished from scrotal Hernia from the fact that the Hernia has an impulsive motion imparted to it if the patient is made to cough.

Treatment - Tapping should be tried several times with compression if this does not avail astringent stimulating injections should be made, such injections as wine or a solution of Tannic acid. The patient should be put on the purgative

system of treatment, and good tonics I presume would be very good treatment.

An
Inaugural Dissertation
On
Epidemic Cholera.
Submitted to the Examination
of the
Provost. Regents and Faculty of Physic
of the
University of Maryland
For the
Degree of
Doctor of Medicine
By
Edward R. Waller
of
Somerset County
Maryland.

Session 1866

Epidemic Cholera

Since the downfall of our first parents man has been liable to a multitudinous host of diseases. No age no climate shields him from their devastating ravages. Even during his embryonic existence when the blastoderm membrane is just metamorphosing itself into a prototype of our great Creator they insidiously enter and consign it's victims, who possibly might have been a brilliant luminary in this lowly world, a place amid the regions of the dead. Through every stage of fatal development do we not frequently discover a series of pathological phenomena presenting

themselves which baffle the efforts of the most skilful and scientific members of the medical profession As soon as the new born infant relinquishes its connection with its maternal progenitor and is ushered into the world, to maintain an independent existence he is exposed to the deliferous influences of innumerable diseases. And they follow him with unswerving devotion through every grade and stage of life leaving him on the verge of the grave. when his spirit unfettered and liberated from its earthly tabernacle takes its departure to seek among the throng that continually hover around the celestial throne. The spot he is destined to occupy during his tem-

porary sojourn in this world is not of much moment; for in every nook and corner of this habitable globe, wherever the sun has shed its resplendent rays whether amid the glaciers of the arctic regions or upon the sandy deserts of Africa, we behold their desolation his endeavors to avoid them are vain he must yield submissively to their potent influences. By far the greater number of these may be successfully combatted or prevented by precautionary and prophylactic measures.

But Epidemic Cholera is one which has as yet baffled the combined talent of the whole medical profession. The inexhaustible resources of

the Materia Medica have been employed without producing any obvious beneficial results — It is an admitted fact that various remedies have been administered which have been reported as capable of arresting the progress of the disease in its incipiency. But the undeviating and irresistible progress with which it has swept over the greater and most civilized portion of the Eastern Continent proves conclusively the inefficiency of the remedies that have been used to stay its advancement. Artificial and natural barriers prove alike ineffectual — Confined as it was in its primordial existence within the narrow and limited confines of the delta of the

Ganges it soon overcame the almost insurmountable obstacles opposed to its passage - Smiled upon the insignificant resistance offered by the cloud piercing and snow covered peaks of the Himalaya - It commenced its fearful and destructive career in Bengal and continued till it had entirely encircled the earth. Wherever it made its appearance the affrighted men women and children in a chaotic or undistinguishable mass sought some safe retreat. The war worn veteran that had encountered death a thousand times undismayed amid the clangor of charging squadrons the clatter of musketry and the roar of cannonry.

the religious martyr that could behold
with unaffected tranquility of mind the
stake at which his life is offered up as a sacrifice.
the political offender that could view
with the utmost composure the sharpen-
ed edge of the Guillotine. must shudder
and stand aghast as they cast their eyes
upon the prodigious dimensions of this
hideous monster. It is approved
self-preservation is the predominat-
ing principle of every one. The mother
when this dreaded disease attacks her
infant is deprived of all motherly af-
-fection. She heeds not the tender imploria-
tions of her pettit and adored babe.
She flees from its presence. She keeps
no watch while its spirit leaves its tiny body

to console by her kind and affectionate look its expiring moments. The gentle lisping of mamma dies away in the surrounding air unheard.

Without making any more preliminary or introductory observations I deem it expedient to enter upon the consideration of the symptoms of this formidable and uncontrollable disease. The prevalence of moderate stomachic derangements, disordered digestion accompanied by diarrhoeal and dysenteric discharges are classed among the precursory symptoms. These frequently assume a more determined character

under the appellation of Cholerine although not Cholera possesses a existing similarity to it and is considered by some as Cholera in a modified form. The distinguishing characteristics are obvious that there almost can impossibility to arrive at an erroneous diagnosis. The coat of morbid matter collected upon the tongue, the irregularity of the appetite incessant thirst, the incapability of the digestive apparatus to perform it's proper functions the tympanitic state of the Epigastrium, the flatulent pains, gripes - alternating diarrhoea. the compleat debilitated condition of the whole system - the occasional dia-

phoretic diathesis are incontrovertible and unmistakable pathognomonic symptoms. Incessant and excruciating pains are experienced in the inferior extremities so severe that they contract the muscles into board like shot. At this stage of the disease, the pulse decreases rapidly; the extremities become cold. a copious diaphoresis covers the whole body accompanied by great diminution in the urinary evacuations. The skin assumes a bluish, leaden or violet color which extends over the entire body, but more conspicuous in the face hands and feet. If the disease is allowed to progress

the alvine evacuations become more
frequent copious and watery. the
thirst is unquenchable with burning
in the epigastrium. the pulse is accel
erated debilitated and sometimes scarcely
perceptible. the breath cool. the tongue
cool and pale but moist. the skin
usually cold mumbled and inelastic.
and the hands and feet present a
very shrivelled and wrinkled appearance
the eyes recede into their sockets encir-
cled with a livid color the conjunctiva
is dry and of a dirty whiteness lachrymal
and lachrymal secretions unexpressed.
difficult respiration, and every symp-
tom indicates the most extreme prostra-
tion. it is now classed approximating:

[illegible] of complete collapse
The pulse is scarcely perceptible
The respiratory movement only
of the [illegible] discernible upon
auscultation. There is stagnation
of blood in the capillaries without
follows an incision. The features
and whole body present such a con-
tracted and shrivelled appearance
that the patient can scarcely be re-
cognized by his or her most inti-
mate friends and acquaintances
There is also a considerable
reduction of temperature. The
thermometer placed upon the
tongue often falls below to
90° sometimes even to 77°

The body has the appearance of death except the eyes which though occasionally are suffused of a little glaze although in a half closed and glazed condition. There is total suspension of the urinary secretion. The evacuations sometimes continue till the close, and are at last involuntary at other times they cease a considerable time before death. Fatal issues may occur at some or further from the commencement of the attack — though much more frequently late in full developed form one or two of these stages. There is no stage which is not susceptible of a favorable change.

evacuations which are with few exceptions
the usual concomitant of this disease
consists of a colorless liquid ev-

pending a while flocculent matter which subsides upon standing is the insoluble matter was formerly considered by supposed to be coagulated albumen or fibrin. Dr. Boehm of Berlin by microscopic investigations discovered that they consisted mainly of epithelial cells in their various stages of development separated or adhering together. The clear liquid is water holding a very small proportion of saline and organic substances in solution. The principal salt is the chloride of sodium Also Carbonate of Soda Salts of lime and magnesia A very insignificant proportion of albumen can be detected by heat and

nitric Acid. Clear stools invariably have an alkaline reaction. The evacuations from the stomach contain more acid and solid matter. Fullerbach states the former contains ninety-eight per cent of water the latter ninety-nine per cent. In investigating the anatomical characters many remarkable phenomena present themselves. The spasmodic twitching of the muscles are observable oftentimes after the heart has ceased to pulsate. If the patient dies during the cold stage, the temperature of the body is increased after all signs of life have disappeared

and this increased temperature continues until cadaveric rigidity begins. when death results speedily, occasionally no morbid change is observable upon post mortem examination - But if death occurs during the stage of collapse - in recovery the whole arterial system is emptied of blood except a few clots in the aorta and left side of the heart. The venous system is congested - Large ecchymosis are found frequently in all the parenchymatous glands The vessels of the lungs generally contain little blood - The Spleen is diminished in size - Peritoneum is dry as are all serous membranes

Enlargement of the solitary follicles and ulceration of elliptical patches are commonly met with besides these Wood mentions numerous other morbid changes which are the immediate attendants upon this disease - After death in the stage of reaction, the phenomena are very different from those of the collapse - but vary considerably with the time that has elapsed from the beginning of that stage. The bladder resumes its healthy condition and dimensions - The peritoneum has lost some of its blackness and viscidity Instead of the venous hue there is a vivid red-

ness in the alimentary mucous mem
brane indicative of inflammation.
Lesions in the nervous centres and
their investing membranes and evidences
of the inflammation of the lungs are
not unfrequently observed. The causes
of this disease are numerous and
diversified and may be divided into
two great classes. The predisposing
and exciting. Although investigations
have made by the ablest men in the pro-
fession still the specific cause is unknown
It has been erroneously supposed by some
that its epidemic influence was in a great
measure owing to a peculiar electrical
state of the atmosphere or the presence of ozone.
The miasmatic exhalations arising from

faecal districts may add immensely to violence to the disease but cannot be considered as the specific cause. For we find Cholera raging in arid mountains sandy deserts, on ships at sea, and also in the depth of winter when the whole country is clothed in snow with an atmosphere pure and uncontaminated except by the poisonous air peculiar Cholera.

The general opinion of the present day is that Cholera is generated and propagated by minute microscopic fungi. This is substantiated by strong evidence — for these fungi or animalcula finding the [illegible] nutriment necessary for the maintenance of which the seed [illegible] [illegible] [illegible]

This although very plausible cause has never
been proved satisfactorily. Very accurate
examinations and investigation have
failed to discover any ingredient in
Choleric air not found in ordinary
atmospheric air. Although it is thought
to be contagious by very many authors
and members of the profession, still
Dr. Wood opposes this opinion and
cites innumerable and valid ar-
guments to substantiate his doctrine.
The advocates of of its contagiousness
offer the following proofs to sustain their ar-
gument: 1st That it travels along the
line of commercial intercourse, ascending the course
of large streams in the tracks of caravans
and from port to port across the seas and oceans.

2d That its rate of advance never exceeds the possible rapidity of human progression: 3d That its occurrence often succeeds the arrival of unaffected ship, caravan or Corps of marching soldiers: and 4th That it attacks is not general in the beginning, but whether in a city or a particular family One or a few are attacked first and others successively, as if the cause had passed from individual to individual — Professor Wood answers the first in the following manner [illegible] says these are not proofs but only evidences so far as they go, of the possibility or at best the probability of its existence — Its known affinity for damp and marshy

regions will be sufficient to direct it course
The large cities that are found upon the
caravans tracts are always selected because
cause the air of these are favorable
to its production and propagation
finally it attacks. Professor Wood
in addition to these offers numerous
other proofs in substantiation of his
argument or opinion - but I do think
it necessary or becoming to insert them
(As I have given a sketch of the course
Symptoms pathology &c I will finish
with the treatment although I do not
feel confident either to offer a proper course
of treatment or to cull it from Woods
Practice. I will be governed in giving the
treatment by our worthy Professor of Practice

and my private Tutor Professor Nathan F. Smith whose views concerning the treatment co-incide. Their plan is the most approved and one that is attended with the most success. Immediately after the person is seized with cholera he should be placed in a horizontal position and should be kept in a quiescent state not even allowed to rise from his bed to evacuate his bowels but a bed pan should be used. Absolute quiescence being far better than experimental medical treatment. The surrounding atmosphere must be pure and uncontaminated as viti-

vitiated atmosphere is one of the most
prolific causes - In regard to the
prophylactic treatment - it is necessary
to remark that intemperance, vi-
cious indulgences deficient alimenta-
tion an exclusive vegetable diet the
influence of crowded residences - Continued
grief, fear and anxiety must be avoided
or controlled - When the epidemic is
raging all sudden & strong mental
Emotions must be guarded against -
Indigestible food, unripe fruit
and vegetables - excessive indulgences
at the table - unwholesome drinks, cider
poor wines imperfectly fermented liquors
very cold drinks when the body is heated.
purgatives especially of a drastic character

should never be allowed as they will bring on an attack - if there is the slightest predisposition. Above all the patient should keep a perfect equilibrium of mind as fright alone destroys more than the disease - The medical treatment must vary according to circumstances. The indications in the first and second stages of the disease deducible from the obvious phenomena are to arrest the evacuations from the stomach and bowels, to relieve irritation of the gastro-intestinal mucous membrane, to restore the suspended secretions especially that of the liver to equalize the circulation, to lessen

or ameliorate nervous disturbance and to support, when necessary, the General strength. These indications are to be met with Calomel & Opium in small doses. Opium should be used to check exhalations into the bowels and to produce general diffusive stimulation - but it is unadvisable to administer this agent in large doses as it will obtund the sensibility and impressibility of the system. Calomel in moderate doses and frequently repeated stimulates the hepatic secretions without producing irritability. but rather have a tendency to allay Stomachic irritation - If the general mercurial influence is induced It may prove beneficial not only by changing morbid action but also obviat-

ing in some degree the danger of inflammation in the fourth stage - In addition to these remedies if the case is obstinate the vegetable and mineral astrin gents should be used in proper doses - The most important of all these is acetate of Lead which is used in the following combination

Calomel gr j
Opium
Camphora āā gr j

- Administered every three hours.

In the stage of collapse stimulation is necessary - Sinapisms may be applied to the abdomen and extremities and Cayenne pepper and brandy, Oil of turpentine, tincture of camphor, Liniment of ammonia &c over the surface of the body.

frictions with ice or iced water have been strongly recommended, and are often very grateful to the patient under the reaction from the cold application, the blueness of the surface & gives way to a glowing redness, the temperature is elevated, and the pulse which may have been quite wanting in the wrist, sometimes returns. When reaction has begun the stimulants should be moderated, or altogether discontinued. I think it altogether unnecessary to mention the almost innumerable remedies to be found in Professors Woods or Watsons Pratice. if the case will not yield to the agents mentioned above - it will rarely succumb to any other treatment.

This disease which has been known scarcely a half century has traversed the whole civilized world over again and again and it has now halted upon the confines of the western continent as if to gather strength for a grand invasion. Science has not as yet taught us how to cure this pestilent disorder but she has taught us how we may do much towards averting it

AN

Inaugural Dissertation

ON

Digestion.

SUBMITTED TO THE EXAMINATION

of the

Provost, Regents and Faculty

of

PHYSIC,

of the

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

Doctor of Medicine,

by

Louis W. Knight

of

Maryland

Session 1865 & 1866

Digestion (digestio; digero, to dissolve) may be truly styled one of the most important functions of the animal body, for it is by its operations, that the circulatory system is supplied with material, to repair the constant waste of the tissues. Prof. Dalton's definition is, perhaps, the most concise — "Digestion is that process by which the food is reduced to a form, in which it can be absorbed from the intestinal canal and taken up by the blood-vessels." All the phenomena of digestion take place in the Alimentary Canal — a musculo-membranous tube extending from the mouth to the anus, and divided into the Mouth, Pharynx, Oesophagus, Stomach, Small Intestine, (comprising the duodenum, jejunum, and ileum) and Large Intestine (caecum, colon, and Rectum)

The food, as it passes through the different portions of this tube, is subjected to various mechanical and chemical influences, which are requisite for its proper preparation. In the first place, it is received into the cavity of the mouth; here it is cut up and ground by the action of the teeth, or, in other words, masticated. The operation of mastication is very important, for if the food be not thoroughly divided, the saliva, and other fluids of the digestive process, will not act readily upon it.
In the mouth the food is also mixed with the saliva, or undergoes insalivation.
The human saliva is the product of four different secretions, viz.; first that of the parotid gland; second, that of the submaxillary; third, that of the sublingual;

one fourth; that of the mucous follicles of the mouth. It is the first of the digestive fluids, and does not contain more than 5 or 6 parts of solid constituents to 994 or 995 parts of water; the principal ingredients, being an organic matter, called ptyaline, and sulphocyanide of potassium. The saliva has the property of converting starch into sugar, and it was, at one time supposed that this conversion constituted the great chemical use of the fluid. Most authors now admit, that the acid gastric juice destroys the action of the saliva on the starchy ingredients of the food, and are of the opinion, that the function of the saliva is a purely physical one, viz., that of moistening and lubricating the food to assist in its ready

passage down the œsophagus.
The food is next transferred, by deglutition, to the stomach. The human stomach is a very dilatable and contractile pouch, having the form of a bagpipe; it is situated almost immediately below the diaphragm, in the left hypochondriac and extending into the epigastric region. It is composed of three coats, viz., external or peritoneal, middle or muscular, internal or mucous. The external coat need not engage our attention in connection with digestion. The middle or muscular coat plays an important part; it closes the orifices of the stomach and forces it to contract on its contents; at the same time keeping up a continual agitation of the food and thus thoroughly mixing it with

the gastric juice. The following account of this agitation of the food, by the muscular coat, is given by Dr. Beaumont; it is founded on observations made in the stomach of Alexis St. Martin, — a Canadian having a gastric fistula, from a gunshot wound.
"The food entering the cardiac end of the stomach, turns to the left, descends into the splenic extremity, and follows the great curvature towards the pyloric end. It then returns, in the course of the smaller curvature, and makes its appearance again at the cardiac aperture, in its descent into the great curvature to perform similar revolutions. These revolutions are effected in from one to three minutes."
The mucous coat of the stomach is studded with numerous glands or secreting follicles,

which produce a fluid very essential to digestion viz., the gastric juice. This secretion is composed of 975 parts of water, to 25 parts of other ingredients — organic matter, lactic acid, and various salts. There has been considerable discussion in reference to the acid existing in the gastric juice; some authors contending that it is the Lactic, others the hydrochloric. Prof. Dalton is of the opinion that is the Lactic acid; he bases his conclusion on experiments made by Bernard; — "Bernard has shown, by a series of well-contrived experiments, that the free acid of the dog's gastric juice is, undoubtedly, the Lactic; and that the hydrochloric acid, obtained by distillation, is really produced by a decomposition of the chlorides, which enter into the composition of the

fresh juice". Dr. Carpenter writes —
"However true this conclusion may be in
regard to dogs and pigs, which are the
animals that have been chiefly experimented
on for this purpose, it is questionable how far
it is fairly applicable to Man. In the first
place, the great readiness with which hydro-
chloric acid was obtained, by Prof. Dunglison,
from the pure gastric fluid drawn from the
stomach of Alexis St. Martin, and the fact
that the smell of hydrochloric acid might
be distinctly recognized in the fresh juice,
are strong evidences in favor of the belief
that free hydrochloric acid is present in this
fluid, and that it is the principal, if not
the only, source of its acidity. The truth
appears to be, that both the hydrochloric
and lactic acids may give to the gastric

juice the peculiar solvent power, which it possesses for albuminous substances, and that one may take the place of the other, so that whilst in Man, hydrochloric acid is the chief source of the acidity, lactic acid may be so in the dog and pig" At any rate, all authors agree that the acid is the most essential element of the gastric juice, for this fluid will not perform its true office if deprived of acidity.

The organic matter, is known under the name of pepsine; it is an azotized substance and, according to Bidder and Schmidt, consists of $C_{53}\ H_{6.7}\ N_{17.8}\ O_{22.5}$

The free acid and pepsine are, then, the two most important constituents of the gastric juice.

On the entrance of the food into the stomach,

the vessels of the mucous membrane become more injected and its color changes from a pale pink to a deep red; at the same time the gastric juice is poured forth and, by means of the peristaltic movements, well mixed with the food. At one time it was contended that the gastric juice exerts its solvent action on all the elements of the food, but it is now admitted, by the best observers, that its action is limited to the albuminoid or organic principles of the alimentary substances. The albuminoid matters of the food are, not only dissolved by the gastric juice, but are also all converted into a new principle termed albuminose, which is freely soluble in water, and after it is once produced by the digestive proces,

remains in a fluid condition and is ready to be absorbed by the vessels. In this way casein, fibrin, muscline &c. are all reduced to the condition of albuminose."

The following facts have been ascertained in reference to the gastric juice.

1st. The action of the gastric fluid, in forming albuminose from the nitrogenous elements of the food, is not limited to the stomach but still goes on in the small intestine.

2d. The gastric juice is poured out in considerable quantity only during digestion, and the amount secreted, depends more upon the general wants of the system than upon the quantity of food taken.

3d. That as the greater portion of the gastric juice is absorbed again, a large amount

can be housed out, with a very small loss to the system.

4th. The nervous system has great influence on the secretion of the gastric juice. Dr. Beaumont's observations – in the case of St. Martin – fully confirm this statement. He noticed that any unusual excitement, such as anger and other mental emotions, at once caused the gastric juice to cease flowing. Dr. Beaumont made many experiments in order to ascertain the length of time required for the digestion of different kinds of food. The following are given as examples.

"Exp. 42. April 7th, 8 o'clock A.M. St. Martin breakfasted on three hard-boiled eggs, pancakes, and coffee. At half-past eight o'clock Dr. B. examined the stomach and found a heterogeneous mixture of the several articles slightly digested.

at a quarter past ten, no part of the breakfast remained in the stomach
Exp. 43. At eleven o'clock, the same day, he ate two roasted eggs and three ripe apples. In half an hour they were in an incipient state of digestion; and at a quarter past twelve no vestige of them remained.
Exp. 44. At two o'clock P.M., the same day, he dined on roasted pig and vegetables. At three o'clock they were half chymified, and at half-past four nothing remained but a very little gastric juice.
Exp. 46. April 9th. At three o'clock P.M. he dined on boiled codfish, potatoes, parsnips, bread and drawn butter. At half-past three o'clock examined, and took out a portion about half-digested; the potatoes the least so. The fish was broken down into small filaments;

the bread and parsnips were not to be distinguished. At four o'clock examined another portion. Very few particles of fish remained entire. Some of the few potatoes were distinctly to be seen. At half-past four o'clock took out and examined another portion; all completely chymified. At five o'clock stomach empty" From the above experiments we may conclude, that when a full meal — of animal and vegetable food — is taken, stomachic digestion is completed in about two hours and a half. Great allowance must be made, however, for the temperament of the individual, amount of exercise taken, quantity eaten, state of the weather, and many other minor points.

As before stated it is only the albuminoid substances, which are digested in the stomach. Starch and the fats, undergo no change until they reach the small intestine. With regard to sugar, Dr. Dalton says that although it is slowly converted, by the gastric juice into glucose outside the body, it cannot be shown that this fluid exerts this effect during ordinary digestion. "If pure sugar cane be given to a dog with a gastric fistula, while digestion of meat is going on, it disappears in from two to three hours, without any glucose being detected in the fluids withdrawn from the stomach. It is, therefore, either directly absorbed under the form of cane sugar, or passes little by little, into the duodenum.

where the intestinal fluids at once convert it into glucose" Dr Carpenter writes — "Saccharine matters, being readily soluble in water, do not require the agency of the gastric fluid, for any other purpose than the solution of their investments, whereby they are set free; and it does not appear that it exerts any converting power upon them"

From the stomach the chyme, or product of gastric digestion, passes through the pylonic orifice into the duodenum; here it meets with three different secretions, viz; the bile, pancreatic juice, and the intestinal juice proper. Almost every author has advanced a different theory, in regard to the action of the bile in digestion, but the

subject is still enveloped in doubt and obscurity; in fact it may be said that nothing is certainly known of the changes produced by the mixture of the bile with the chyme.

The pancreatic fluid is secreted by the pancreas — "a long, flattened, conglomerate gland, analogous to the salivary glands." It is a clear, somewhat viscid, and ropy fluid, having a strong alkaline reaction; composed of 900.76 parts of water, organic matter - called pancreatine - 90.38, and various salts. The pancreatine is the most essential constituent of the pancreatic juice, and gives to this fluid its peculiar property in digestion. From the experiments of M. Bernard most physiologists, of the

present day, are of the opinion that the office of the pancreatic fluid is to form an emulsion, termed chyle, with the fatty ingredients of the food. It must not be supposed, however, that the fat in this process undergoes any chemical alteration; it is simply held in emulsion by the pancreatine. The intestinal juice is the product of the various glandular organs of the small intestine. Our knowledge of this fluid, when compared with that of the other digestive secretions, is very limited; it does not contain any special or characteristic ingredient, like the other digestive secretions. We have now enquired into the digestion of all the ingredients of the food, with the exception of the

starchy principles. Starch passes unchanged through the stomach, but on its arrival at the small intestine, it is at once converted into glucose or grape sugar, by the action of the mixed intestinal fluids

By the action of the various fluids of digestion, then, we find that three different substances are produced, viz,/

1st. Albuminose, formed by the action of the gastric juice on the nitrogenous or albuminoid elements.

2d. Chyle, an oily emulsion, produced by the pancreatic juice acting on the fatty principles.

3d. Glucose, or grape sugar, by the agency of the mixed intestinal fluids on the starchy principles.

When the several ingredients of the food have been thus prepared, they are ready to be absorbed into the blood, and answer the purposes of nutrition. By the peristaltic movements of the small intestine, the food is made to pass from above downward, and is, at the same time, presented to the absorbing power of its mucous membrane. Albuminose and glucose are taken up by the ramifications of the portal vein; chyle is absorbed by means of the lacteals.

When the food arrives at the ileo-cæcal valve, or termination of the small intestine, all the digestible portions have been absorbed. The residue, with the remains of the intestinal secretions, then passes

through the ileo-cæcal orifice into the Large intestine, where, together with certain substances excreted by the mucous membrane, it forms the faces. By the act of defacation the faces are expelled from the body. Having now traced the action of the various fluids of digestion, in preparing the food for absorption, I beg leave to conclude my Thesis.-

AN

Inaugural Dissertation

ON

Chium

SUBMITTED TO THE EXAMINATION

of the

Provost, Regents and Faculty

of

PHYSIC,

of the

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

Doctor of Medicine,

by

Frank C. Cormier

of

Manchester, Carroll Co. Maryland.

Session 1866.

Opium.

The Papaver Somniferum or Poppy is an annual plant indigenous of Asia as well as of Egypt.

[illegible] demonstrated [illegible] from the [illegible] the poppy is sedously cultivated in Oriental regions. Different varieties of the plant are recognized viz: The white and the black. The former however proving the greater prolificacy necessarily claims the greater attention.

Five different kinds of Opium [illegible] is [illegible] with [illegible] the Constantinople the Egyptain the Persian and the Indian.

[illegible] and is consequently the most largely imported. The [illegible] varieties are greatly inferior [illegible] not deserving of any special comment. It is true they are said to possess all the virtues of Smyrna Opium but many of them if not all do not approach in strength to what is called uniformity. [illegible] the Persain variety is seldom used, so also the Opium of Hindostan which appears to be little more than a mere object of curiosity. Should the inferior varieties continue to be imported to this country it is [illegible] allowed alteration be made [illegible] for the preparations of Morphia.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

acts as a [illegible] the majority of cases the normal quantity of urine is greatly lacking. Besides there is not unfrequently a difficulty [illegible] the renal derangement. Its action upon the skin corresponds with its effects upon the secretory organs.

[illegible]

[illegible]

similar condition. Profuse sweating
is a constant attendant
Opium eater makes to abdicate this

symptom is [illegible]
and in [illegible]
[illegible]
[illegible]

A miliary [illegible]
[illegible] is said to [illegible]
[illegible]
[illegible] account [illegible] cuta-
neous distress. But the insupportable
irritation of the dermal structure is
seldom productive of any eruption
so far as the writers experience extends,
and might if all present be more
justly attributable to some other cause.

The Therapeutical applications of
Opium are extremely numerous as well
as various and the extent of its employ-

ment exceeds that of the majority of [illegible] diseases to which human flesh is heir too but what presents indications for its remedial virtue. and few pathological affections exist but what Opium if [illegible] the Chief is the sole [illegible] agent called into requisition.

By virtue of its direct stimulant influence upon the Cerebral centres it is especially indicated in disease.

The anodyne power of Opium [illegible] tanks among the most important parts of its action. Indeed as a [illegible] in [illegible] affections it cannot be surpassed and stands first upon the [illegible]

the digestive organs [illegible] occasionally subject yield readily [illegible] action of this invaluable medical agent.

The intense pain attendant [illegible] calculus as well as the agony attendant upon the passage of a similar product through [illegible] readily conquered by the anodyne power [illegible] of Opium.

Its control over the secretory

[illegible]
[illegible]
[illegible]
[illegible] medical agent.
[illegible] character.
[illegible] state of the
brain indicated by [illegible]
[illegible] muttering and
[illegible] circulation is not a contra
indication. [illegible]
[illegible] state [illegible]
of the [illegible]
a [illegible]
[illegible]
[illegible]
preciated in fevers when we con
sider its powerful in suppressing

those morbid debilitating dis-
charges attendant upon a
[illegible] state.

In insanity opium is fre-
quently [illegible] requisi-
tion and in [illegible] [illegible]
it is absolutely indispensable.

In [illegible] it is almost
[illegible] [illegible] but in
the three last named diseases
the quantities given must be
enormous and frequently
repeated even then alarm-
ingly large doses often prove
abortive producing either
no effect or but a moderate or
temporary one. In symptomatic

[illegible]
favorable to adiaphoretic
[illegible]
[illegible]
[illegible]
[illegible] malignant
secretions which by their
retention in the system would
forbid the employment of this
invaluable therapeutical agent
[illegible] account of the power it ex-
[illegible] in suppressing normal
[illegible]

Opium is frequently used
in conjunction with other im-
portant therapeutical drugs.
It is administered in conjunction

with Ipecacuanha calomel and camphor equally fine with these important medical agents.

The object of such combination is mainly to prevent the undue expulsion of medicines thus combined.

Other substances are frequently employed in combination when the sole action of Opium is desired but this is simply done to disguise the remedy and thereby overcome any prejudice the patient may

have entertained against its employment.

So numerous are the Pathological phenomena to which Opium is applied, that the writer lacks space to sufficiently enumerate all the important uses of the drug.

AN

Inaugural Dissertation

ON

Typhoid Fever

SUBMITTED TO THE EXAMINATION

of the

Provost, Regents and Faculty

of

PHYSIC,

of the

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

Doctor of Medicine,

by

Charles D. Anderson.

of

Howard Co, Maryland

Session 1866

Gentlemen of the Faculty of Physic of the University of Maryland;

To you am I indebted for nearly all that I know of the science of medicine, and ever will my memory turn to you with most grateful feelings for your useful instructions and kind efforts to thoroughly prepare me to practice the profession of medicine.

In this my thesis, which I dedicate to you, I hope you will expect but little, as my opportunities have been limited. But I trust, no matter what

may be the character of the thesis, that the practice be such as shall bring no discredit on either you or myself.

Typhoid Fever.

The term typhoid as applied to this disease is regarded by some as objectionable, as it expresses only a condition common to many other disorders.

Symptoms.

This disease is sometimes preceded by prodromic symp.

toms. There is a sense of weari-
ness, languor, and general un-
easiness, slight headache, on
raising in the morning, dull-
ness of intellect, irregular flush-
es of heat or chilliness, slight
accelerations of pulse, furred
tongue, and a disposition to
diarrhoea. These symptoms
may last from several days
to a week or more, after which
the disease is established by
the occurrence of a chill follow-
ed by the ordinary signs of fe-
ver.

The disease being fairly
established, there is increase

of frequency of pulse, ranging from 90-120, the latter usually in females. As a general rule, the pulse is under a hundred. There is headache with a dull heavy expression, pain in the back and limbs, restlessness and insomnia, epistaxis and yellow watery diarrhoea. As the disease advances these symptoms become aggravated, the pulse is more frequent and strong, the skin hot and dry, the tongue dries and becomes red at the tip and edges, pain in the right iliac region

with a gurgling sound upon pressure, and there also appears about this time symptoms of bronchitis or pneumonia. About the seventh or ninth day if the surface of the abdomen be examined there will be discovered upon it a ~~small~~ number of small round red spots disappearing upon pressure; these are called the rose coloured spots and constitute a characteristic eruption. All the symptoms at this period are aggravated, delerium supervenes with ringing or buzzing sound

in the ears, followed by dull-
ness of hearing or deafness.
The eyes are injected, the tongue
becomes incrusted with a black
coating, which often cracks or
peels off leaving the raw surface
exposed and the teeth are cover-
ed with sordes. The pulse becomes
more feeble and frequent, there
is a low muttering, delirium
and sometimes spasm of the mus-
cles. As the patient becomes
more feeble, he slips down to
the foot of the bed; there are
involuntary evacuations, hem-
orrhages from the bowels, and
other mucous surfaces with great

tendency of the skin to slough.

This is the usual course of the disease, when it terminates favourably. If the disease is to terminate favourably, the symptoms abate; the countenance brightens, the tongue cleans, the pulse lessens in frequency, and the evacuations become more healthy. If the tongue ceases to clean, and again becomes dry, it indicates an increase of intestinal disease. It often happens at times the emaciation becomes more evident than it was before. Sometimes, in the course of the second week, the patient is seized with intense

pain in the abdomen, vomiting of green bilious matter, a small fluttering pulse, syncope, constipation and coldness of the extremities. The cause of these symptoms is perforation of the intestines and escape of its contents into the cavity of the peritoneum producing inflammation. It occurs most frequently in the mild forms of the disease, and is almost uniformly fatal.

Anatomical Characters.

There is scarcely an organ of the body, that may not be the seat of some anatomical lesion. Those

which are considered characteristic of this fever, namely the thickening & softening and ulceration of the glands of Peyer. The condition running with the stage of the disease, enlargement, softening and ulceration of the mesenteric ganglia, more especially those corresponding with the morbid patches in the ileum, and according to some writers, ulceration of the solitary mucous follicles of the ileum. These ulcerated patches are not due to previous inflammation, but to the deposit of a peculiar dark matter,

from the blood typhus or typhoid matter, beneath the mucous membrane, so as to elevate the patches of fever above the surrounding surface. The tendency of which matter is to soften; this causes the mucous coat to give way.

Other lesions met with are, ulcerations of the pharynx, and epiglottic cartilage, softening of the spleen, sometimes of the liver and kidneys, hepatization of the lungs, softening of the heart and sometimes inflamation of the meninges of the brain with effusion.

The blood drawn in this

disease is generally deficient in fibrine, and is said by some authors to contain an excess of blood corpuscles. I think this doubtful.

— Causes —

On this point little is definitely known. It attacks all classes, rich or poor, though it is often generated where a number of persons are crowded together, with unwholesome or insufficient food, and confined and vitiated air. It cannot be said to be contagious, since it is seldom if ever communicated in isolated cases. Age is a predisposing cause.

A party attacks those beyond thirty. Strangers are more liable than long residents, and males than females. It may occur at any season, but most in autumn and winter.

A party occurs more than once; hence perhaps its comparative infrequency in the aged.

— Diagnosis. —

By the slowness and insidiousness of the attack; by the diarrhoea; the dusky hue of the countenance; the epistaxis; the gurgling in the right iliac fossae; the tympanites; the rose coloured spots; eruptions

the pulse and delirium, the appearance of the tongue; and lastly by the duration of the disease, and the peculiar musky smell when the skin is dry, and acid smell when it is moist.

Prognosis.

Not even the mildest case can be looked upon as free from danger, and on the other hand, there is no condition so low, no symptom so complicated, that recovery should be considered inevitable. Among the unfavorable symptoms are constant delirium, a belief on the part of the patient that

nothing ails him; a sudden shifting of position on the elbows, deep coma, stertorious respiration rigidity of the limbs, profuse diarrhoea or hemorrhage from the bowels, great prostration and frequency of the pulse, and excessive tympanites. The favourable symptoms have already been mentioned.

Treatment

This should usually be commenced with some mild laxative, such as a small dose of Sulphate Magnesia, castor oil, rhubarb and magnesia or a seidlitz powders according to the nature of the case.

It should always be borne in mind, the diuretics or the kidneys to act, and avoid all irritating and drastic cathartics. The next thing is to obviate febrile symptoms. This may be done by venesection, when the pulse is full and strong, and there is sanguineas determination to the brain. The protracted duration of the disease must also be born in mind, and no blood drawn unless imperatively demanded. Leeches or cups to the head may be advantageously employed where there are evidences of congestion or inflamation as evinced by pain or tenderness in the locality.

Diaphoretics are useful through-
out the whole course of the dis-
ease. Of these the neutral mix-
ture with tartarized antimony
or Sweet Spirit of Nitre may be
given in the early stages of
the disease, and spts Min-
dereri with nitre in the lat-
ter stages. Cold sponging, if it
do not chill the patient, is an
important remedy, and the inter-
nal use of ice often very grateful.

If the patient be very feeble
spirits and water may be substi-
tuted for pure water. Cold appli-
cations to the head by means of
ice in a bladder are very service-

able in spite of brandy & opium. Should there be much abdominal tenderness, a few ounces of blood should be drawn, by leeching or cupping, followed by the application of warm fomentation. If the diarrhœa be profuse, it should be checked by Opium, either alone or combined with Kino. or Sulphate of Copper. Nervous symptoms may be combatted by the use of Camphor water or Opium, if not contraindicated. In the advanced stages of the disease, when the tongue is dry, the urine scanty, and the skin parched

action, there is delirium, or increased stupor, and abatement of the vital action, no remedy is more effectual as mercury, given so as slightly to affect the gums. Calomel or blue mass may be given.

Should the disease not yield, especially if the tongue remain dry, and the abdominal distension undiminished, the use of oil of turpentine, particularly in that stage of the disease when the tongue instead of cleaning gradually from the edge and tip, parts rapidly with its fur, first from the middle or back part of its surface, which

is left smooth and glossy or of deprived of its papillæ, it should be given in doses of from five to twenty drops every hours or two, and its use continued for two or three days. If the debility increase, the patients strength should be supported by cordials and stimulants. Beef tea or beef essence, wine, whey &c. together with the use of quinine, opium, terpentine. &c, as the exigencies of the case may demand. Sloughing must be prevented by obviating pressure, and in case of perforation of the intestines, recourse must be

had to large doses of Opium

Some practitioners use Quinine throughout the disease, others rely upon bleeding "Coup sur Coup" - Boullard). Others upon purging throughout (Delaroque). Prof Ritchie has great confidence in the internal use of Argent. Nitras. in doses of from 1/8 to 1/4 of a grain, and increasing it till a metallic film appears upon the fecal evacuations.

By some it is supposed to act by coming in contact with the ulcerated patches of Peyer upon which it exercises it specific astringent and sedative influence.

Hams has been recommended for this purpose. The diet should be mild and unirritating in the early period of the disease, gradually becoming more nutritious as the disease advances and the debility. During convalescence it is of extreme importance to guard against an improper diet and fatigue. The debilitated condition which is apt to remain is best treated with Quinine.

AN

Inaugural Dissertation

ON

Inflammation

SUBMITTED TO THE EXAMINATION

of the

Provost, Regents and Faculty

of

PHYSIC,

of the

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FOR THE DEGREE OF

Doctor of Medicine,

by

[illegible] C. [illegible]

of

Maryland

Session 18[illegible]

irregular, [illegible], all motion of the blood ceases, and the vessels appear fully distended. Lifeless, and lastly, the [illegible] sanguinis is exuded through the walls of the vessels; And when exhaded, it coagulates, and therefore it constitutes a foreign body in the texture of the parts affected. This being done, the only thing nature has left, is either to remove it entirely from the system, or else modify its action, so that it may not be an incumbrance

of the course of the economy. The contraction and dilatation of the capillaries is very explicable, when we suppose that they are endowed with the power of contractility, of course similar to that existing in non voluntary muscles. It has been said by learned men, that these are muscular, from the results of their own observations and experiments. In structure they resemble the muscular fibres of the intestines, and like them are irritable

to be contracted or dilated,
... by local application
; through the ...
..., the various changes
we see taking place in the
Capillaries are very ...
... when we remember
that the circulatory sys-
-tem is on the hydrau-
-lic principle. It is very
clear that if a tube be
narrowed and a certain
quantity of fluid be
driven through it with
considerable force, the
propelling force being the
same, that the blood will

... in ... rapidly, ... contrary ... if the tube be widened, the ... of the blood propell-ed through will be ... impaired. And ... the Capillaries become ... the ... blood is at first irregular - ... motion should ... cease and finally the liquor ... is ... through the walls of the vessels. Therefore as Inflammation and Exudation seem to be synonomous ... I will proceed -

to give the characteristic signs. The first that we would have, is the (preternatural redness) of an inflamed part, the cause of which is frequently plain, & it arises from an increased determination of the red particles of blood into a part. A very beautiful example of this is seen in the tunica Conjunctiva of the eye and as also can be seen under the microscope, when applied on a vessel that had been stimulated. The second

[illegible]
symptoms and should be
looked for by all means.
Auscultation will afford
us the means, for we
should always avail our-
selves of this opportunity;
and indeed it is incumbent
on us as physicians. For this
kind of inflammation should
always be looked for, as
it generally is very trou-
blesome to manage. The per-
sons most susceptible
to this kind of inflamma-
tion are the aged, and
especially those who are

An

Inaugural Dissertation on

Scarlatina

Submitted to the examination

of the

Present Regents and Faculty

of Physic

of the University of Maryland

for the degree of Doctor of

Medicine

By

John A. Taylor of

Pennsylvania

Scarlet fever is ushered in as
the exanthemata generally with
rigors drowsiness languor and
pains in the back and limbs
the fever commences with
frequent pulse furred tongue
hot and dry skin and the
nervous disorders are indicated
by headache restlessness delirium
stupor and sometimes
convulsions. The fever sometimes
is mild scarcely amounting
to disease in other varieties
exhibiting great violence and
along with the fever there is
generally irritation or inflam-
mation of the fauces and

mucous membrane of the head which if examined appear red and swollen. The same color is diffused over the interior of the mouth and the tongue though coated with a white or yellowish fur exhibits red papillae projecting upon its surface and is red at its tip and edges. The rash mostly appears upon the second day and presents different forms. It occurs usually upon the face neck and breast whence it gradually spreads over the trunk and extremities. In the beginning it is in

minute red points which
coalesce in patches and form
a continuous scarlet blush
over a large portion of the surface.
Sometimes it is very scanty
presenting only a few scattered
points here and there. The
redness is generally diffused
over the face and neck and
appears with great intensity
in the flexures of joints. The
color is represented as a dark
hue it disappears under pressure
and returns upon the removal
of the pressure. During the
exacerbations of the fever the
color is deepened and

[illegible]
[illegible]
[illegible]
and causes [illegible]. The [illegible]
does not abate upon the [illegible]
ance of the rash but continues
with various degrees of violence
throughout the attack. The pulse
is generally more frequent than
in febrile diseases of the same
degree of violence amounting
to 120 or 130 beats in the minute
and occasionally still more
frequent. It has occasionally
considerable force but this is
not its predominant character
The skin is generally dry

and burning hot, the patient has exacerbations toward evening frequently attended with restlessness, delirium &c. The bowels are generally Constipated in the beginning of the disease but diarrhoea occurs sometimes in the advanced stage, the stomach is sometimes irritable but this is not a very frequent Symptom The affection of the throat in some cases is very trivial but then again becomes the most prominent, distressing and dangerous Symptom of the disease The disease generally attains its height from the fifth

to the ninth day when in favora-
ble cases all the symptoms begin
to decline. The rash fades [illegible]
ly vesicles if present dry up
the heat of skin diminishes the
pulse becomes slower and fuller
and the tongue if it has not alrea-
dy thrown off its fur does so now
then remaining red and glossy
with prominent papillae. Some-
times critical discharges take
place from the skin or bowels.
Desquamation generally begins
with the decline of the cutane-
ous eruption. Sometimes it
is furfuraceous at other times
the cuticle separates in small

scales and [illegible] it is thick
as upon the palms of the hand
and soles of the feet it comes
away in large flakes. Desquama-
tion is usually attended with
itching irritation and tender-
ness of the skin. Desquamation
is generally completed by
the end of the second week
though sometimes continued
longer on account of a succes-
sion of exfoliations. Albumen
is often found in the urine
and when examined by the
microscope is said to contain
portions of the urinary passages
But the disease often presents

more dangerous symptoms [illegible]
the beginning [illegible] been [illegible]
shaking and [illegible] death
takes place in the first stage
from the overwhelming shock upon
the nervous system. Inflamma-
tion occasionally attacks some
vital part as one of the serous
membranes with fatal results.
Sometimes the affection of the
lungs proves fatal or the patient
may sink from the debility
consequent upon the malign-
ant character of the affection
or exhausting purulent discharges
incident to local affections.
Having given a general view

of the [illegible] [illegible] [illegible]
[illegible] I shall [illegible] [illegible]
a brief sketch of its three varie-
ties.

Scarlatina Simplex. This is distin-
guished by fever and rash the
throat being but little involved
though never I believe entirely
exempt. The first sign of the
disease which attracts attention
is a scarlet blush upon the
face and neck attended with
some febrile movement, which
may end upon the fifth or sixth
day and sometimes sooner.
But in other cases it is more
severe. There may be a

universal diffusion of the rash with intense heat and redness of Skin and frequently [illegible] Slight delirium. [illegible] from concealed malignancy there is not much risk of life

Scarlatina Anginosa. The character of this variety is more formidable than the one first described and is therefore attended with more danger to the patient. the eruption is usually somewhat later in making its appearance than in the simple variety. It appears in different forms sometimes confined to a particular part

then in patches, partly confluent
[illegible] skin of the patient [illegible] it
being and again diffused over
the body [illegible] and [illegible]
Sometimes after lasting [illegible] it
disappears. perhaps to return after
a longer or shorter interval and this
process may be repeated once more.
The fever is more violent
than in the simple variety with
a more frequent pulse and great
tendency to stupor or delirium
The inflammation of the fauces
advances with the progress of
the disease, and the eyes are
often red though not watery
as in measles.

The fauces, tonsils, uvula and soft
palate when examined are found
to be swollen and of a deep red
color and covered with patches
of a concrete exsudation resem-
bling false membrane. The pat-
ches are of a dirty white yellow-
ish or ash color and are some-
times very extensive, extending
into the pharynx as far as can
be seen. The membranes are soft
and when removed leave the
surface reddened and generally
without organic change though
they sometimes may cover
ulcerated or eroded patches
which may even be gangrenous

[illegible] disease
of [illegible]
swelling of the inflamed
parts in the region of the parotid
and submaxillary glands of a
hard and painful character caus-
ing stiffness of jaws &c. It was
once supposed that the parotid
was the seat of the inflamma-
tion but modern pathology
places it in the lymphatic
glands. Deglutition is painful
and difficult and when atte-
mpts are made to swallow
liquids they return through
the nostrils. The nasal passages
are also often much affected

of the [illegible] [illegible] [illegible] [illegible]
the [illegible] [illegible] [illegible] [illegible]
it relieve[illegible] [illegible] [illegible] the
patient. It sometimes happens
that typhoid symptoms attend
this variety.

Scarlatina Maligna or Malignant
Sore throat. This term is applied
to that variety of Scarlatina
attended with great prostration
in which the powers of life may
be overwhelmed at once. In this
variety the pulse is [illegible]
[illegible] and [illegible]
[illegible] [illegible] in one place and
hot in another. the respiration
alternately slow hurried

or irregular [illegible] [illegible]
livid [illegible] [illegible] [illegible]
breathing. [illegible] [illegible]
reaction may be made and pi
rile heat partly established to
again disappear but the system
is soon [illegible] out and death
ends the scene. In other cases
attended with greater energy
of system the symptoms [illegible]
ble to the anginose variety.
The most prominent symptoms
of malignancy are the livid
[illegible] pains in the [illegible]
and lower extremities weak
pulse. late and scanty appear
ance of the eruption and the

tendency to a darker hue. The fauces also presents a deeper hue of redness than the simple varieties. As the disease advances the symptoms become more dangerous the exudation in the fauces is of a dirty or dark hue. Sometimes becoming black gangrene sets in with great destruction of the soft parts the breath becomes fetid the tongue brown, the teeth incrusted with dark sordes. Blood oozes from the tongue and lips and hemorrhages may take place from any of the mucous surfaces. It is at this period

back of throat. This [illegible] is likely to set in with sunken features a cold and clammy skin, fluttering pulse &c.

Sequelae. It appears that few diseases leave a longer train of evils behind them. Scarlet fever. A very common and troublesome sequelae is abscesses in the region of the parotid and submaxillary glands. The inflammation sometimes travels along the eustachian tube to the ear resulting in an abscess with the destruction of the tympanum or impair

[illegible] in [illegible]
closing up [illegible]
permanent deafness. [illegible]
diseases sometimes affect
the [illegible]. Diarrhoea is another
frequent result and the stom-
ach may become involved giv-
ing rise to gastro-enteritis.
Females are sometimes affec-
ted with inflammation of
the vagina giving rise to a
muco-purulent discharge.
The serous membranes are
not unfrequently the seat
of inflammation. Dropsy
appears to be the most frequ-
ent sequelae in the form

of anasarca [illegible] it [illegible]
present in the form of ascites.
Dropsy in this disease is [illegible]
erally attended with scanty
and albuminous urine dep
endent upon active congestion
of the kidneys. The cause of
scarlatinal dropsy is attrib
uted by most authors to a
too early exposure of the
tender skin to the air sup
pressing the external elimi
nation of the poison and
throwing the whole duty
upon the kidneys.

Anatomical characters

the Kidneys are generally found congested or inflamed. The blood is sometimes found to be ok in others thin and red, sometimes red in others dark and coagulated

Causes. The cause of Scarlatina is probably specific and generally thought to be contagious. The cause is generally thought to be communicated through the medium of the atmosphere. Scarlatina frequently occurs epidemically often very limited being confined to a small district of country

[illegible] [illegible] of Scarlet-
ina [illegible] differ greatly
in its effects being in some
instances almost all wanting
while the reverse sometimes
occurs. In some instances
it presents its self in the
Sthenic in others the asthe-
nic form. Age is no exemp-
tion to Scarlatina though chil-
dren are most liable to it. The
disease prevails at all seasons.
Persons are seldom attacked
with Scarlatina more than
once. The period of incubation
is set down at from
two days to two weeks

Diagnosis

Scarlatina may be readily mistaken for many other diseases in its early stages and before the eruption takes place. The most important symptoms appear to be an increasing frequency of pulse and redness of fauces. From measles it may be known by the absence of catarrhal symptoms and by the rash appearing on the second day instead of the fourth and by the characteristic anginose affection and the peculiarity of the rash

which is of a [illegible] but [illegible]
more [illegible] in the beginning
and more uniform at last without
the clustered or crescentic arrangement
of the tubercles eruption and
without its roughness. When both
diseases prevail at the same time
they may be mingled together.

Prognosis When the malignancy
is mild we may predict a
favorable issue under favorable
circumstances but if the
malignancy is otherwise the
disease is very dangerous
The disease is generally danger
ous is pregnancy and the

puerperal State, under other circumstances women appear to bear it better than men.

Treatment. In this disease Hygienic Rules are certainly of great importance in the three varieties. In the simple variety antiphlogistic regimen in regard to diet and regulation of temperature with confinement to bed will often be all that is necessary. In other cases in which the symptoms are not so favorable an emetic of Ipecacuanha alone or in combination with Tartar Emetic may be given

medicine. The propriety of bleeding in Scarlatina has been much discussed and different conclusions arrived at. If the patient should be [illegible] with delirium and other things equal I would cautiously try bleeding by placing the patient in a sitting position but I think bleeding should be practiced with much caution on account of the tendency to the asthenic state of the disease. It is becoming a taste to say that stimulants should be given in the Anginose and Malignant forms as they may [illegible] many complications

I think it is that very de[illegible] must be treated according to the circumstances and not in the same. In all cases when the skin is dry and hot much good may be derived by sponging the surface with cold or tepid water according to circumstances. When the fever is developed a course of internal refrigerant treatment should be adopted. Small doses of the Neutral Mixture Acetate of Ammonia Citrate of Ammonia or Citrate of potassa may be given every one two or three hours according to the necessity of the case

Should avoid [illegible] Bicarbonate of Soda or potass may be occasionally given with the frequency of pulse may be moderated by Digitalis. If the urine be scanty mild diuretics should be employed as Bitartrate of potassa. Acetate of potassa &c. The nervous symptoms may be controlled by Hoffman's anodyne Camphor. Valerian &c. When prostration occurs or a tendency to the typhoid form exists it should be met by stimulants and tonics with a nutritious diet, the tincture of the muriate of Iron is a most valuable Medicine

in this disease both internally and externally.

Local treatment. When severe inflammations occur leeching or cupping would I think be preferable than blistering. Should abscesses occur about the neck emollient poultices should be applied. As a mouth wash I should use the recipe recommended by our friend [illegible] Tinct of Muriate of Iron 2℥ Chlorate of Potash 1℥ Water 1℥. In cases of gangrene &c. Nitrate of Silver Sulphate of Zinc are recommended and which must be applied

according to the particular require-
ments of the case, the leading indica-
tes attention. I shall now close
the subject by returning my
thanks to the Professors of the
University of Maryland, who
have certainly did all that men
in their position could do to in-
struct the minds of the Student.

An

Inaugural Dissertation

On

Anæsthesia in Labour.

Submitted to the Examination

of the

Provost Regents, and Faculty of Physic.

of the

University of Maryland,

for the

Degree of

Doctor of Medicine,

By

James V. Knotts

of

Queen Ann's County

Maryland.

Anesthesia in Labour.

Gentlemen and members of the Faculty of Physic of the University of Maryland.

In accordance with the rules and regulations of your institution, I am required to submit to your Honorable Body for perusal a thesis upon some subject connected with the study of Medicine.

Yet I feel very great embarrassment in the performance of this arduous but pleasant duty, this feeling

a embarrassment and diffidence arises not from any disinclination on my part to abide by the statutes of our Alma Mater" but from a consciousness of my inability to produce a thesis worthy of your perusal. The above subject which I have chosen is one upon which I cannot speak from observation, but merely from medical theory. Before entering into this subject I think it necessary to define the term. Anesthesia according to the definition of Dunglison is a privation of sensation, or es-

pecially that of touch. It has been but a very few years since these Anæsthetic agents were introduced into practice of Obstetrics. and their introduction were for no other purpose than the relief or removal of physical suffering which ever since the fall of man has been the dreadful or fearful attendant upon human parturition. It is said that Anæsthetic agents were first introduced into the notice of the medical profession for the purpose of alleviating pain or suffering during the performance of surgical Operations.

There are several Gentlemen who claim the honour of discovering them. The credit is generally to Dr. Morton a Dentist, or to Dr. Jackson a Lecturer on Chemistry, both being residents of Boston U.S. Each of whom claim the credit of discovering them. Yet it is very doubtful upon which one of these gentlemen the honour should be conferred. for it is a well known fact that the power possessed by some Elastic fluids when inhaled, or respired, of mitigating pain and occasioning transient insensible

ity was discovered before the commencement of the present century.
They were first employed in the Massachusetts Hospital in the year eighteen hundred and forty six, by Dr. Hayward, in the amputation of the thigh which resulted satisfactorily. Several years after they were introduced into obstetrical practice. It is chiefly owing to the indefatigable exertions of Professor Simpson, of Edinburgh, that this novel procedure has taken such a hold upon the public as well as upon minds of superior intellect in the medical profession

as regards the beneficial use of these agents in obstetrical practice, The first instance in which Professor Simpson used Ether in this way and with this object occurred on January the nineteenth in the year eighteen hundred and forty seven, The patient had a deformed pelvis, and the professor determined to deliver by turning and extracting by the feet, having first induced Anaesthesia, with a view to facilitate the operation, The experiment being attended with the happiest results the use of these

appeals were immediately awarded
to by obstetricians. The first
popular precedence of the
British being complete
with the eulogy and panegyric
upon the virtues of these reme-
dies in alleviating pain and
facilitating parturition, but
the use of these was not destined
to remain within the narrow
limits of that sea environed
land. As soon as a favorable
part of them crossed the Straits
of Dover, like every other
delusive novelty it spread itself
like wild fire over the greater
portion of the European

men of Europe was a suffi-
cient recommendation to es-
tablish itself among the
lovers of novelty upon the Western
Continent. Although these a-
gents have been used by
very eminent Obstetricians
throughout both Continents
successfully. Yet I will
not hesitate a moment to assert
that in my humble opinion they
should not be used in any case
of natural labor, unless by one
who has had considerable
experience in their administration.
There are various and innum-
erable reasons why they should

noble used: the obstetrician must not forget that the encephalon is a compound organ, a part of which the hemispheres are devoted to the offices of intellection; part, the cerebellum, to the duty of co-ordinating or regulating the movement of the force which is generated perhaps by the whole nervous mass; a part, the tubercula quadrigemina, to the faculty of seeing or vision; and a part, the medulla oblongata, to the important office of governing & giving origin to the act of respiration.

Thus we have the brain of intellection, and those of co-ordination of force, of vision and of respiration. They may be denominated the thinking, co-ordinating, seeing, and breathing bulbs of the nervous mass. Since the encephalon is divided into these several organs, each of which is liable to be attacked by these agents. And what obstetrician is able to foresee the consequences which may result from their administration? In case the Oblongata is the seat of attack death from asphyxia will be the inevitable result -

Therefore that practitioner, who has by the unskilful administration of these agents, consigned two of his fellow mortals to a premature grave, is in my opinion, just as culpable as the midnight assassin and should receive in common with him the severest penalty of the law. For he ought to be aware when he is called upon to attend such cases that the safety of two human beings are confided to his care, and their lives depends upon his judgment and skill. In natural labor is it advisable or in accordance with the dictates of common

sense to administer agents for the momentary relief of pain, which they are productive of the most injurious and even fatal consequences both to the mother and child! for if they do not immediately cause death they sow the seed of diseases which will render life miserable — Effusions Convulsions, and idiotcy are ranked upon the list of frequent results of etherization and Chloroformization.

Suppose in prolonged or tedious labours the obstetrician administers these agents until complete anæsthesia is produced. What are the disastrous consequences that are likely to ensue?

Suppose he is under the necessity of resorting to mechanical force in the expulsion of the fœtus. What may be the result? May not the Uterus or some one of its appendages suffer some serious organic lesion? Perhaps these organs maybe so badly ruptured that it may cause the immediate death of the woman, or if she should survive the operation, her health maybe impaired during the remainder of her life. In these cases the bladder may become very much distended so much so

that it may be ruptured. this serious affair will in all probability escape the observation of the accoucheur whose attention at the time is engrossed in administering and watching the effects of these potent agents.

My objections to the use of these in obstetrical practice are quite numerous. In the first place they retard labour from the relaxing influence they exert upon the muscles of the abdomen and Uterus. for it is an established fact that it is through and by the contraction of these muscles that the

process of human parturition is carried on. if these muscles are relaxed then parturition must be undoubtedly retarded, and the foetus expelled by gravitation alone. Some able and eminent members of the profession, contend that the action of the uterine and abdominal muscles are rendered more powerful and effective under its use, while at the same time it has a tendency to facilitate the dilatation of the soft parts, so necessary for the safe and easy egress of the foetus. This is, in my opinion,

a direct contradiction, for how can the same agent act differently on the same organ at the same time, thatisly producing relaxation and contraction simultaneously of the muscles of the Uterus. If these agents act upon the whole muscular system with the exception of the uterus, then the Uterus must be an independent organ. If this be the case from whence does the fœtus obtain its nourishment? Or why should emmenagogues be adminished per orem? For if this is an independent organ medicines per orem will

exert no influence whatever over it. This we know is not true for if a woman is laboring under an attack of amenorrhoea or dysmenorrhoea we know that the administration of certain remedies act upon the uterus such as Drow Aloes &c. This of itself proves clearly to my mind the fallacy of their doctrine. In the second place there is great danger of secondary hemorrhages which result from the relaxed state of the muscles of the Uterus, there are also many other reasons why they should not be used - such as dis-

cases of the heart, Surgery &c. Another objection, and one that has presented itself to the mind of many a scrupulous and conscientious woman, that man was endeavouring to devise means that come in positive and direct collision with the Divine decree, which says "In pain and agony ye shall bring forth your offspring."

This Thesis is respectfully
to Professor G. W. Wilson
token of esteem for the interest
and Practice of Obstetrics by
February 22nd 1886.

AN

Inaugural Dissertation

ON

Typhoid Fever

SUBMITTED TO THE EXAMINATION

of the

Provost, Regents and Faculty

of

PHYSIC,

of the

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

Doctor of Medicine,

by

Walter W. Downie

of

Baltimore Maryland

Session *Fifty-Eight 58*

Typhoid Fever

This is an endemic fever of certain portions of Europe and the United States, and is perhaps known to the whole human family.

It is a febrile affection, presenting a diversity of symptoms, yet still having a distinguishable character by which we are able to recognize it.

It was for a long time confounded with typhus fever, which, in many respects, it strongly resembles, and it was not until after Louis,— from whom it received its name— had, by his researches, determined its Anatomical, in connection with its exterior character, that we were enabled to recognize

it under all circumstances.

This disease is known by many names, and authors are still unsettled as to what it shall be called. It is variously denominated. common or continued fever, typhus mitior, nervous fever, follicular enteritis, abdominal typhus, entero-mesenteric fever; and our distinguished American author, Prof. Wood, proposes the name of enteric fever as the most appropriate, it being expressive of the fact that this fever is distinguished from all other idiopathic fevers, by the frequency and extent of intestinal disease, which is as characteristic of this affection as eruption is of Variola. Still, as misnomers in nomenclature are abundant,

and to change the name of a disease is only calculated to lead to confusion, I think we had better retain the old familiar names; at least I shall do so throughout my dissertation.

Symptoms.- This disease comes on very gradually, sometimes it is ushered in by a chill followed by the usual symptoms of fever, but most generally it is so insidious in its character that it is difficult to fix the precise time of its commencement. For a period of time, varying from a few days to as many weeks, there will be a dull, heavy, stupid feeling, a sense of weariness, general uneasiness, languor, accompanied by a fee-

of coming on numbness of the limbs and headache in the morning, the appetite is, to some extent impaired; the tongue is slightly coated, the skin is somewhat heated, the pulse accelerated and the face flushed, dullness of intellect, irregular flashes of heat and a diarrhoea; or, if the bowels are not very loose, there is great susceptibility to the action of cathartics. A dose of any of this class of drugs, so small that under ordinary circumstances the effect would scarcely be perceptable, occasions very free evacuations. In fact the patient is satisfied that he is not well, but yet is not ill enough to take his bed or willing to send for a physician.

These symptoms increase in intensity, during this period, the sufferer may have a feeling of chilliness, alternating with sensations of fever.

As these symptoms become more and more developed, the skin becomes dry and hot, with occasional flushes of chilly sensation along the back, but rarely amounting to rigors. The pain in the head increases, the pulse is accelerated - in some cases not more than 90 or 100 full and strong, whilst in others, especially in females it is frequent, small, and compressible, ranging from 110 to 120, beats in a minute.

The disease is now fairly on its way,

and exhibits the ordinary phenomena of fever, such as complete loss of appetite, great thirst, heat and dryness of skin, and general weakness, epistaxis — which is frequent, and a characteristic sign, but not otherwise important — nausea, and a dark red shining face, but not so dark as in typhus, restlessness, and want of sleep. pain in the head, back, and limbs, with a dull, heavy expression; the tongue becomes dry and red at the tip and edges; there is pain in the right iliac region, which is increased and accompanied with a gurgling sound when pressure is made; the abdomen is tympanitic,

and there appears about this time symptoms of bronchitis or pneumonia; the urine is high-colored, fetid and scanty. Such are generally some of the symptoms, until the seventh or ninth day, when others are developed which leave no doubt as to the disease. If the surface be examined small, oval, rose-colored spots, like flea-bites, will be discovered which are slightly elevated and which momentarily disappear upon pressure. These petechiæ, as they are called, ultimately spread over the whole body, to a greater or less extent, and are about a line in diameter. About the same time Sudamina are observed on the neck

and chest and other portions of the body; these are small vesicles.

The nervous symptoms now become more marked; there may be a disposition to stupor, but more frequently a wild delirium, preceded by an augmented brilliancy of the eyes, takes the place of headache.

Ringing and buzzing in the ears followed by hardness of hearing, amounting almost to deafness; the eyes are injected; the tongue is covered with a black coating; and has a gashed appearance, is tremulous, and not readily protruded, the teeth and gums are covered with sordes.

The surface is hot and dry in some

feats and cold in others; the pulse is feeble and exceedingly frequent. The patient lies in a stupid, comatose state, from which he may be momentarily aroused, has his mouth open, breathes hard, low muttering delirium with twitching or spasm of the muscles. As the patient grows weaker, he slips down toward the foot of the bed. the pulse is more frequent the feet and legs are cold, while the head is generally hot. the breath as well as the exhalations of the body are very peculiar and very offensive. involuntary motion of the muscles. picking at the bedclothes or catching at imaginary things

in the air. involuntary discharges from the bowels, and frequent hemorrhages from various surfaces, especially from the intestines; hiccough, a great liability of the skin to slough, the surface is bathed in a cold clammy sweat, and the breathing jerking.

These are the general Symptoms when the disease ends unfavorably.

If the attack is to end favorably, the Symptoms will abate, the pulse will become slower, the tongue will begin to clean, commencing at the tip and edges, Sometimes from the centre, when the incrusted material will be thrown off in flakes.

—This process of coating and cleaning of the tongue, may be repeated several times,— the countenance brightens, the patient has more solicitude for himself, and pays more attention to things around him, there is a little appetite, or at least, less aversion to food.

If the tongue thus cleaned, should remain moist the prognosis is favorable. On the contrary, if instead of remaining moist it should become permanently dry, the Symptoms are aggravated and indicates an increase of intestinal disease.

There is occasionly a fatal termination of this decease, which requires particular attention, About the second

week of the attack, just as we are consoling ourselves with the idea that the danger is all over, and are looking for a happy recovery, the patient is suddenly seized with a severe pain in the abdomen. Sometimes there is only tenderness, vomiting of bilious matter anxious countenance, constipation, Syncope, and death.

The cause of these Symptoms is, perforation of the intestinal canal whereby the contents escape into the peritoneal cavity, setting up peritonitis.

Anatomical Characters.—After death nearly every organ in the body has revealed signs of inflamation, the spleen, the heart, the kidney,

the liver, the lungs, the brain, the spleen
and the duodenum and the respira-
tory passages are all at times more
or less involved, but there is one
change or peculiar condition of
this disease which is as character-
istic of it as the eruption is of
Small pox and that is the diseas-
ed condition of the patches or
glands of Peyer, in the ileum or
small intestine. So common is it to
this affection, that should there, from
any cause, be doubt as to whether
the party had died of Typhoid fever,
or not, a post-mortem examination,
revealing the peculiar condition
of these glands, would be conclusive,

The patches are found to be thickened and slightly elevated above the surrounding mucous membrane. The largest are from two to three inches in length and half an inch or more in width. Their long diameter is in the direction of the intestine. There are two varieties, hard and soft. The hard patches may undergo resolution or ulceration; the soft always ulcerate.

In some instances the floor of the ulcer is the muscular coat, and in others, in consequence of the destruction of the latter, it is the peritoneal coat, and this when it is perforated, allows the escape

of the contents of the intestine into the peritoneal cavity. The perforation is produced by ulceration, mortification or rupture from some force within the bowels. Other glands beside these are more or less affected. such as the messenteric and solitary glands.

Causes.- Nothing definately is known of the cause, of typhoid fever. It is most frequent in Summer and Autumn, attacks the rich, and poor, males, oftener than females, and those under thirty years of age, are more liable to it, than those above that age. It is probably generated by animal malaria, and is most certainly

produced by a vitiated air. as it often breaks out in prisons. hospitals on board of ships. and other places where people are crowded in close quarters. with bad ventilation. Young persons coming from the country to the city to live. are very apt to be attacked with it. unwholesome food. debility. great fatigue. violent exercise. excessive evacuations. intemperance. and mental or physical influences.

With regard to the contagiousness of typhoid fever there is much discordance of opinion among medical men. but as there are strong reasons advanced in favor of its contagious character. it is better to

be on the safe side, and act as if this were the case until the contrary has been satisfactorally proven.

This disease may be distinguished from typhus fever — with which it has been confounded on account of their resemblance — by the following signs and symptoms. In typhus the bowels are costive, rarely loose, deafness is common, pulse very frequent from 100 to 160 beats per minute-tenderness upon pressure over the abdomen, tympanitic distention of the abdomen seldom present, capilliary congestion of the face and body, of a dull red, dusky or dingy hue, sometimes a dull red eruption of small size.

not elevated, and disappearing imperfectly upon pressure; may occur at any season of the year and at any age; bleeding at the nose rarely happens. The tongue, teeth and lips are covered with dark sordes or fur. Whereas in typhoid fever we have almost constantly diarrhoea and very seldom constipation. deafness not so frequent, pulse rarely over 100. and never more than 120 beats per minute. always tenderness in the abdomen, with pain upon pressure, especially in the right iliac region and accompanied with a gurgling sound. Tympanitis distension of the abdomen always present. some-

times capillary congestion of the face with considerable redness. Almost always an oval rose-colored eruption. Slightly elevated. The redness disappearing momentarily upon pressure. With Sudamina. Occurs most frequently during fall and winter and is less apt to attack those over thirty years of age. Bleeding at the nose most frequent and often among the first Symptoms. The teeth are covered with sordes, but seldom any other portion of the mouth.

Diagnosis. The slowness and insidiousness of the attack. the diarhoea the epistaxis. the dull or heavy expression of the countenance. and dusky

P

sum of the face. the cough, the symptomatic distention. and tenderness of the abdomen. with the gurgling in the right iliac region. and the peculiar rose-colored stools. with sudamina

Prognosis.- There is no case so severe that should be given up or despaired of. and on the other hand there is none so slight that it should be neglected. This mildest case may suddenly present the most alarming symptoms. as is the case occasionly when we are flattering ourselves with the prospect of a happy convalescence. intestinal perforation takes place. Among the unfavorable symp

-toms are an idea of the patient that nothing ails him. Stertorous breathing. constant delirium. coldness and clamminess of the surface and deep coma.

Treatment. This should be supporting; and the secretions carefully watched. A mild cathartic or laxative may be given in the begining, such as Rhubard. Magnesia. Castor Oil or a Seidlitz powder. to clear out the primæ viæ but the great tendency to diarrhœa, should always be remembered. and all irritating or drastic medicines avoided. An emetic in the onset is recommended by Dr. Bennett. who states that it will often arrest the

attack, or if too late for this will mitigate the form very much.
Diaphoretics are useful and should be used throughout the attack. local bleeding may be resorted to in case of congestion, tonics to husband the strength such as Elixir of Vitriol, Quinia, hux hams tincture of bark, &c Diet, beef tea or essence, milk punch, and chicken broth, no solid food should be given until disease is fairly over. When Diarrhoea is too excessive, it should be checked by Opium. Lead. Tannic acid or some astringent. Should the disease not yield, especially if the tongue remain dry, and the abdominal distension undiminished. Dr Wood strongly recommends the use of

Oil of Turpentine. particularly in that stage of the disease when the tongue, instead of cleaning, gradually from the edges and tip, fasts rapidly with its fur first from the middle and back part of its surface which is left smooth and glassy as if deprived of its papilla. It should be given in doses of from 5 to 20 drops every hour or two. and its use continued for several days. It is useless to attempt to cut short this disease after it is fairly established, as these fevers have a certain period to run, averaging from a few weeks to as many months. The best way is to watch the case carefully. and treat Symptoms as they exhibit themselves

AN

Inaugural Dissertation

ON

Inflammation,

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of the

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of

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of the

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by

John R. Hooper,

of

Eldridge Landing, Maryland.

Session Class 1865-66.

Inflammation.

The proper consideration of this phenomenon is of prime importance because of its intimate connection with almost every disease to which the human subject is liable.

In some morbid condition it is a cause of other lesions which may become even more fatal than the original affection. The careful study of its nature and effects, therefore of vital importance.

Inflammation may, in fact, be defined as an excess of vital action which involving a more or less amount of morbid sensibility. It exhibits redness, increased heat, pain and swelling. The symptoms are not all

usually present; pain may sometimes
be wanting, and redness and heat pass
away before the disappearance of other
symptoms.

(1) Redness. a This is of various shades,
usually brightest in a central spot,
and gradually losing its color as the
inflamed portion joins the healthy
tissue. b The color disappears upon
pressure, returning again quickly
or slowly, depending upon the activity
or feebleness of the local circulation.
c This appearance is caused by an
increased amount of blood in the
distended capillaries of the part.

(2) Increased Heat is connected
with the increased flow of blood and

felt by the patient: It is perceptible to the touch of others and shown by the Thermometer. It is a necessary consequence of the afflux of blood to and through the inflamed portion, and of the increased vital action by which animal heat is generated in the repair of tissue.

Pain, may either precede or accompany the first appearance of Inflammation and is sometimes relieved by the subsequent swelling and suppuration. It causes and an altered condition of the nervous sensibility, and pressure exerted upon these nerves by the Tumefaction. The character of this symptom is often varied by the

kind of tissue in which it is situated.

Swelling. This is caused by the increased amount of blood in all the vessels; effusion of fluids, or deposit of plastic or solid matter into the proper tissue. It may be prominent, diffused or circumscribed, and either hard or soft.

Causes.

Inflammation may result from any irritating or disturbing cause, sufficient to derange the functions or continuity of any organ or tissue of the body.

In solutions of continuity, it is a necessary step towards repair and re-organization. The presence of foreign bodies and sometimes of unhealth-

secretion [illegible]

in which suppuration and ulcerative absorption are present for the elimination of such offending matters. Excesses of food, drinks, changes of temperature, contagion, wounds &c all may produce characteristic inflammations.

Nature.

Various theories have been advanced regarding the physical nature of inflammation, but experiments and close observation by the microscope have revealed much that is considered conclusive, while upon these facts have been based different opinions. - The first observable phenomenon after the application of an irritant or stimulant to a vascular surface is in the capillaries. A contraction

their walls followed very soon by dilation, seen; in some cases dilation takes place from the first. The blood moves more rapidly, during the period of contraction having slower motion as the vessels become dilated. Currents of blood are seen moving in diverse directions and sometimes converging towards a central point of irritation. While globules, increasing in number are now seen showing a tendency to move more slowly than the current, and to attach themselves to each other and the sides of the capillaries. These accumulate, and becoming clogged together prevent the passage of the solid constituents of the blood and the part is then said to be congested.

[illegible]

proceed to any of its terminations.

Changes of Secretion.

The beginning of Inflammation in organs or tissues of secretion and excretion generally produces an increase of the proper secreted substance. Then when the action becomes established, a diminution below the natural quantity takes place, again followed by increased volume; but somewhat changed so as to be hurtful and irritating to healthy surfaces with which it may come in contact.

Products.

When Inflammation goes beyond a certain point there is a production of one of two substances and sometimes of both. They are, coagulable lymph & pus.

Coagulable Lymph.

This substance is developed almost so soon as the inflammation is established. It is a plastic fluid composed of fibrinous and watery portions of the blood and is thrown out from the vessels of the affected locality. — The fibrinous part coagulates forming interlacing fibres and in this appears red points which elongate and communicating with the capillaries of adjoining living tissue, become themselves bloodvessels, and the new formation is an organized living structure. In whatever part of the body this process occurs, the resulting new growth maintains the same identical nature of the tissue it is intended to unite or replace, but excepting the muscular and cutaneous. [illegible]

...ous substance is [illegible] [illegible]

pleurae, peritoneum [illegible] cause [illegible]

no lasting inconvenience. The watery

portion containing albumen and [illegible]

salts is collected in the cavities of the

part and may be absorbed or escape

by natural or external openings.

<u>Pus.</u> This is a thick fluid substance

of yellow or green color and opaque.

It is composed of albumen, fatty matter,

various salts and water. Microscopically,

it shows small round or oval corpuscles

floating in an albuminous liquid

closely resembling the blood serum.

It may appear within a few hours

or not for some days and then in minute

quantities, mixed with coagulable lymph

[illegible]

It presents much sameness of constituent parts; but while in healthy subjects it is harmless to others, that produced in persons, whose blood is tainted by some disease, is endowed with the power of communicating the specific poison of such disease to others.

When healthy it is useful as a protection to granulating surfaces, which condition it almost always accompanies.

In debilitated subjects and in many affections of a low or contagious character, it manifests a tendency to soften and dissolve into itself adjacent soft tissues and sometimes dissect its way at great distances through such parts of the body, being unconfined by coagulated fibrin.

Its production is accounted for in various ways
but it is generally believed to be formed by a
secretory change of the congested blood in
the inflamed portion.

Pathology.

Inflammation may be divided into acute and
chronic and a subdivision of local, sympa-
thetic and constitutional.

Acute, is that form in which the pro-
cess is decided & vigorous and evinces a full
share of pain, heat, redness and swelling.

The chronic form exhibits a mod-
ification of the symptoms as seen in the
acute variety — the termination often
being of a firmer character; the pain less
distinct — and the redness and heat often
wanting. — Canine tissues are more subject

to this sort of inflammation but any tissue or portion of the body may become affected by [illegible] [illegible] [illegible] [illegible] [illegible] not sufficient to bring on an acute attack.

A simple local affection [illegible] without affecting neighboring tissues or any [illegible] [illegible] the system at all.

Sympathetic Inflammation is that communicated to a neighboring organ or tissue, or to one more distant and yet connected by similarity of structure or function.

Constitutional effects are produced by a specific inflammation possessing sufficient violence or intensity, to disturb the equable distribution of nervous energy and also affecting the blood, producing

[illegible]

Terminations.

The terminations of Inflammation have been variously stated by writers, and many authors have adopted the following as the most common and correct: viz

Resolution, Effusion, Induration, Adhesion, Granulation and Cicatrization and, Gangrene and Mortification.

Resolution is a process by which the elements of tumefaction are gradually absorbed and the healthy condition is resumed.

Inflammation may end by effusion of the fluids of congestion through the walls of the capillaries into the tissue or cavities; and may ultimately be absorbed or find a natural outlet.

[illegible] organized in the minute structure of a part causing it [illegible] and it remains indefinitely. These considerations exhibit different degrees of nutrition. When coagulable lymph is poured out on loosely apposing surfaces, it may become organized and unite these parts firmly, causing considerable trouble.

Important joints are sometimes completely stiffened by this substance — This condition is called adhesion.

Granulation Cicatrization.

These are terms used to signify a process terminating an inflammation, by which tissues, ~~which~~ previously destroyed or separated, are to be renewed or reunited.

In such cases coagulable lymph is formed out upon the bottom or sides of the affected part and which becoming organized by contact with living tissue forms small red, conical eminences, which themselves becoming proper tissue, go on to accomplish a similar process, and this is repeated until the required new growth is attained.

The granulations then become flattened and take to themselves a covering mostly similar to the original or adjacent tissue. In such newly made tissue, are formed bloodvessels, nerves and absorbents as had existed previously in the part.

Granulations have a tendency to coalesce and draw together opposite parts with firm contraction.

Cicatrization is the process of taking on the final covering or finishing of granulation. - The line or mark indicating the spot is called the cicatrix.

In all granulating surfaces except the most superficial there is form a covering of pus. -

Gangrene and Mortification.

Gangrene is a result of Inflammatory action produced by an excess of that action beyond the supply of Vitality. - It may arise in subjects, in low states of health produced by improper diet and ventilation.

In a part becoming gangrenous, the color takes a dark red or livid shade, the circulation ceases, sensibility is

[illegible]

[illegible]

condition of the part changes.

The tissue has become softer but of a tough consistence and loses its preternatural heat.

Mortification is a complete [illegible] vitality the dead portion being separated from living parts beneath and cast off by ulceration. The ulcerated surface may then get well by granulation.

Ulceration.

One of the processes of Inflammation is that called ulcerative absorption and by it foreign noxious bodies are eliminated. Around such matters inflammatory

[illegible] by their irritant action, and softening of the immediately adjacent portion takes place and the softened tissue becomes changed into pus. - This is then called an abscess. - The process of breaking down and changing into pus, may be continued into the tissue surrounding, but generally tends towards some natural outlet or the external surface. When an opening is reached or made the pus escapes and the offending matter with it. The resulting cavity, meanwhile may have commenced a process of granulation from the bottom while yet the ulceration is proceeding towards the surface - The opening or excavation is called an ulcer. It may soon be filled with granulations & thus get well.

Effects on the Blood.

In cases of [illegible] marked changes are noticed in the blood, both in its constituent proportions and in its appearances when allowed to coagulate. The fibrin is found to be increased in quantity, the albumen somewhat diminished, while the red corpuscles are generally undisturbed in their relative amount.

When inflammatory blood is drawn and allowed to stand in an open vessel, the fibrin, beginning to coagulate includes the corpuscles in its network and the fluid serum is pressed out from its meshes.

The coagulation goes on slowly and to allow a slight settling of the red globules, giving the surface a whitish appearance [illegible] This is

called the [illegible] cover. The comparative absence of corpuscles in the upper part also allows a firmer & closer contraction of this portion of the clot whose margin is drawn together or bent over, giving with its depressed centre, a cupped form.

This buffed & cupped development of the clot is the almost invariable accompaniment of the inflammatory condition; It is noticed in only one other morbid state; Anemia.- In the advanced stages of pregnancy it is frequently noticed. In the beginning of an inflammation, the blood does not present this appearance, but after some progress has been made these characters are strongly manifest and are present while the inflammation continues.

[illegible] circumstances it is conceived that the increased amount of fibrin is [illegible] by some [illegible] process and carried along with [illegible] circulating fluid.

This opinion is further strengthened by the close analogy between fibrin and the white lymph globules, seen moving with the currents of blood in an inflamed membrane and which are also seen in the fibres of the commencing buffy coat.

Treatment.

[illegible] variety of therapeutical processes, used separately or combined, according to the style and degree of the affection.

The indications are to prevent in serious congestions, indurations or adhesions. To promote their absorption when it has occurred; To develope and discharge suppurating matters; to promote granulations; remove dead parts or foreign and irritating bodies, and to put the system in the best condition to accomplish these results by proper nutrition or medical agency.

To limit congestions and so prevent hurtful lesions, or cut off the further progress of inflammation in its beginning,

[illegible]

[illegible] is frequently, local abstraction of blood, sufficient. Counter-irritation and revulsion by means of rubefacients, sinapisms or blisters, are often called for. For passive congestions astringent or stimulating applications are beneficial. To promote suppuration we may use warm and emollient poultices which hasten & benefit this action by supplying warmth & moisture. These may be medicated to suit special conditions.

Granulation is generally best accomplished by the Vis Medicatrix Naturae, when let alone or attended to enough to guard against hurtful influences.

[illegible]

[illegible] ace. Sometimes sloughing and dead parts must be removed by the knife or caustics prior to any amendment.

There are inflammatory cases in which remedies addressed to the general system have more influence than all other treatment, and in such the local exponent of the disease improves and disappears as the general health and normality is regained.—

AN

Inaugural Dissertation

ON

Intermittent Fever

SUBMITTED TO THE EXAMINATION

of the

Provost, Regents and Faculty

of

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of the

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

Doctor of Medicine,

by

Thomas Kelly

of

Maryland

Session 78

Intermittent Fever

I entertain but little hope of presenting any new or original ideas on the subject which I have chosen for my thesis. There is scarcely a disease endemic to this climate which so early tests the ingenuity & skill of the practitioner as this. From the frequency of its occurrence, a favorable reputation may be gained by a prompt and successful manner of treating it. A close study therefore should be given to its causes, symptoms, sequelae, & the best mode of successful treatment.

This disease is marked by paroxysms of fever, recurring at certain stated periods - between the intervals of which the patient enjoys comparative good health.

The fever takes its type from the length of the interval. Thus, when the paroxysms return every day, or with

an interval of 24 hours, it is called a quotidian, every two days, a tertian and every third day a quartan. These are the most common types. There are other types, such as quintan, sextan &c. but they occur rarely, & the treatment is the same as in the other types.

There may be a double quotidian, - that is, two paroxysms occurring on one day, - or the paroxysm of the morning may differ from that of the evening. The tertian & quartan may also double. Cases may occur in which the paroxysms are altogether irregular - this is neutic intermittents.

A paroxysm of regular intermittent consists of three stages; - the cold, hot & sweating, succeeding each other in the order named. Its attack may be felt, sometimes, for several days at a certain time, & each recurrence becoming more marked until the paroxysm

is fully developed.

Cold Stage. The patient is languid, has a sensation of cold, generally in the limbs, which gradually spread & increases until it becomes very distressing. The teeth chattering & the patient shivering as if exposed to the blasts of winter, - the finger nails become purplish, the features shrunken and the countenance pale, the tongue furred and moist - frequently nausea & vomiting of mucus bile &c. The respiration is hurried a sense of oppression at the epigastrium often accompanied with cough. The pulse is generally ~~slow~~ small - may sometimes be frequent, or slow, irregular & feeble. The secretions are scanty though the urine is copious & pale. The nervous system is deeply affected - besides the tremors, there is pain of a neuralgic character in different parts of the body - pain in the head, stupor, coma & sometimes apoplectic

symptoms are present. The duration of the cold stage varies, but the most authorities give its average duration as an hour.

2d Stage. The transition from the cold to the hot stage is gradual, the first impression of heat being rather pleasant to the patient. The pain increases, the breath warm, the eyes sparkle, the surface generally distended with blood, the temperature of the body is gradually increased, the patient complaining of a burning heat. All the secretions are now scanty, the urine hot and high colored, the tongue dry and furred, the pulse usually full & strong, sometimes frequent, the thirst usually very great, although nausea & vomiting may exist. The most distressing symptom is a pain in the head as if the temples were distended.

The hot stage lasts from two to eighteen hours.

3d Sweating Stage. This comes on gradually, the perspiration

first appearing on the face & chest spreads gradually over the whole body. The pain in the head abates & in [illegible] all the phenomena of fever disappear, leaving the patient comfortable until the next paroxysm. The duration of the paroxysm varies. In some cases the cold stage is wanting, constituting what is called dumb-ague, sometimes the sweating state is replaced by a copious discharge of urine or by a diarrhea.
The dropsical symptoms which sometimes accompany intermittents may occasionally be owing to an ill developed third stage.

Intermission or Apyrexia. After the paroxysm has subsided, the patient, although comparatively easy, labors under a sense of muscular debility & languor, - there is furred tongue, an uneasy sensation upon pressure at the epigastrium & pain in the head & limbs

Cause. Always Miasma.

[illegible] [illegible] general [illegible] an attack of intermittent occurs about the same hours, every 1st 2d or 3d day according to its type, but sometimes, it may occur an hour or two earlier or later, constituting anticipating or retarding fever. It seldom occurs at night - when a receding or anticipating paroxysm reaches the night, it either occurs earlier in the following morning. The more frequent the paroxysm the earlier in the day it takes place, thus in Quotidians it is apt to occur in the morning & the during the evening in quartans. Intermittents if left to themselves will not in general run on indefinitely. In mild cases they sometimes end with the 4th or 5th ~~day~~ paroxysm, but it generally continues much longer. After an attack has been checked, it is apt to return, usually about the 7th, 14th or 21st day. This has been observed often, but no explanation of this occurrence has been given. A patient may be affected with fever

at the opening of spring, although he was cured of it in the fall. In general, all subsequent attacks without a fresh exposure to the cause are milder than the previous paroxysms. Intermittents may be sthenic or asthenic, according to the previous strength & health of the patient & the virulence of the poison. The first form is inflammatory, the second typhoid. The symptoms may be slight or they may be so violent as to threaten a speedy & fatal issue; intermittents may be complicated by inflammation of one or more of the internal organs, as the liver, stomach &c. In such cases the blood exhibits the buffy coat. Gastritis is indicated by pain on pressure over the epigastric region, desire for cold drinks & constant nausea & rejection of all food — hepatitis by pain in right hypochondrium & shoulder, inability to lie on right side — pain in the breast, viscid sputa & cough indicate an affection of the lungs — the brain or its membranes

or in delirium, coma, convulsions, stupor &c. – these are frequently met with – convulsions may be controlled by [illegible] the practitioner. These inflammatory symptoms may be so severe as to give rise to symptoms during the interval – thus converting an intermittent into a remittent – the true nature of the disease being seen only upon the subsidence of these symptoms.

If an attack of intermittent be promptly checked, it leaves no unpleasant consequences behind beyond a predisposition to return. But frequent attacks produce frequently serious sequelae, the most frequent usual being chronic enlargement of the spleen constituting what is called the ague cake. This enlargement is supposed to be due to frequent congestion of this viscus – to which the other viscera are also more or less liable – of with the blood thrown from the surface & extremities. It may become so large as to

extend half way across the abdomen.

The liver sometimes becomes large and indurated, giving rise to jaundice, dyspepsia and functional derangement and sometimes dropsy. The dropsy may arise either from a watery condition of the blood or obstruction of the portal circulation consequent upon enlargement of the liver. Nervous diseases & others have been said to be benefited by an attack of intermittent, but it is difficult to understand how a disease which impoverishes the blood & deranges the nervous system & through it the other systems, can be beneficial.

There are only two fevers which are likely to be mistaken for this — hectic & remittent. From hectic it is distinguished by the urine, the heat, furred tongue, gastric symptoms & by the serious organic lesions of which hectic is only a symptom. Remittent is known by the continuation of the fever during the intermission, although it is sometimes

difficult to distinguish the two diseases.

The prognosis is favorable. The more complete the apyrexia, the more readily does the disease yield to treatment. Pure uncomplicated cases of this fever rarely prove fatal although persons have been known to die of inflammation of the brain, rupture of the spleen &c. of dropsy caused by the intermittent; this occurs generally in neglected or badly treated cases. Generally the ill effects remedies, & often the fever yields readily to treatment. The tertian is the most easily cured - the quartan the most difficult.

Treatment. This naturally divides itself into four parts; - that of the cold & hot sweating stages, & that of the intermission. Treatment of the cold stage is internal & external. Great prostration which is indicated by faintness & feeble pulse, require stimulants - carb. ammonia & oil turpentine are preferable to the alcoholic, because they are quicker in their actions, their stimulant effect does not last till the approaching

hot stage [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
their effects. Hot teas may be plentifully given & when the
stomach [illegible] [illegible] [illegible] [illegible]. The [illegible]
treatment consists in hot applications to the feet, hot sand
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
well with blankets. Some have advised blood letting in this
stage; but it is seldom ~~advisable~~ beneficial.
The hot stage. All the treatment of this stage should
be of a cooling nature. Any cooling mixture which
will not offend the stomach, may be given.
The effervescing draught, neutral mixture Liq. Acet.
Ammon. Liq. Cit. Potass are very good.
When there is a strong determination of blood to the
head, bleeding may be employed, if there are no
symptoms of debility present - if there are, cups or leeches
to the back of the head, or ice to the head. When the
symptoms assume a typhoid character, the Dover's powder

may be given. In the sweating stage nothing is requisite but care to guard the patient against any accident from cold. The most important part of the treatment is during the intermission, for it is during this time that the remedies which break the fever & cure the patient are given most advantageously. The first indication is generally to move the bowels, & the best agent for this purpose is calomel, for while it unloads the bowels, it relieves the congestion of the liver, which exists in a degree more or less in every case of ague. It may be combined sometimes with another cathartic to insure its speedy operation. The bowels being freely moved, the next indication is to prevent a return of the paroxysm & to effect this we use the antiperiodics, ~~some~~ of which Peruvian Bark and its preparations are the best. The bark is now hardly ever used on account of the bulk of its doses. Its salt, the Sulph. Quinia is the one most generally used. It should be given

until the critical symptoms show that it has affected the system. The dose varies according to the type of the fever & the susceptibility of the patient. In an ordinary intermittent with an intermission of 24 hours, two grains of Quinine every 2 hours will generally prevent a return. Some give larger doses. This treatment, modified according to circumstances, ought to be continued to the 7th day, resumed again on the 13th for a few days & again on the 20th. If then, there is no indication of a return the patient may be considered cured. This treatment has usually been successful.

There seems to be a gt difference of opinion among the profession as to the time when Quinine should be given. Some contend that when given during the paroxysm, it aggravates it, and that the inflammatory symptoms should be subdued before it is given. But of late years it has been given during the paroxysm and is said not to aggravate the symptoms in the least by those who have carefully watched

its effects. When inflammation is caused by the fever, of course there is no question but that quinine should be administered and even when it exists independent of the fever, it is probable that the paroxysm aggravates it more than any remedy. All the other preparations of bark have been used with varying success, but the general experience is that quinine is the most reliable form. The practice of giving it in large doses unless in exceptional cases, should be avoided both on account of the cost of the drug & the danger of inducing cerebral disorders. A moderate dose will accomplish as much to the cure of the disease as a very large one, while no risk is incurred. In the list of antiperiodics, Arsenic stands next to Bark. It is usually given in the form of Fowler's Solution, in doses of gtt vm ... x ter die, until the disease is broken or the peculiar effects of the medicine begins to appear when its use may be suspended for a time. Sulph. Ferri has been used, as also most of the salts of the other metals. Tinct. Iodine in doses gtts xxx ter die,

has been used with some success. Willow bark and its active principle, salicin, has been greatly praised, but it has not met the expectations of the profession. Almost everything having any claim to [illegible] has been used in the treatment of this disease. All have cured some cases, but sometimes certain emotions as fright, fear, joy &c have cured cases, and some of these remedies may have been beneficial only through the remedial agency of the mind. But bark & quinine are the most reliable remedies, and are used to the exclusion of nearly all the others. After the disease is cured, good hygienic measures should be rigidly enforced — the bitter tonics, tinct. Iron & Quin. or Huxham's tinct. given, and exposure to miasma carefully avoided. Keeping the system under the moderate influence of quinine or bark in malarious regions is advisable & has been tried with great success. With these precautions a recurrence of the disease may be avoided.

AN

Inaugural Dissertation

ON

[illegible]

SUBMITTED TO THE EXAMINATION

of the

Provost, Regents and Faculty

of

PHYSIC,

of the

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

Doctor of Medicine,

by

[illegible]

of

[illegible]

Session 78

...ce and suppression of the age.
...founded as it was in the suffering
...undervalued or neglected, consequently a
...advanced from his rude state of civ-
...in the acquisition of new facts, a

[illegible]

[illegible]

[illegible]

[illegible]icated diseases, and observe the changes

[illegible] take place from their origin to their

[illegible]ation. In the class of inflammations we

[illegible] at first sight seem to bear lit-

tle or no relation to the phenomena of

health; yet on examination we find

[illegible]

[illegible]

[illegible] health, [illegible]

[illegible] changes, or phenomena of [illegible]

redness, and swelling, [illegible]

[illegible] cause, or condition on which they

depend, are all explicable [illegible]

[illegible] presented by the healthy [illegible]

[illegible]
normal state, is reduced [illegible]
[illegible] obvious alterations of the system, [illegible]
[illegible] the operations of secretion and absorption.
In other words all the morbid processes, [illegible]
[illegible] in the whole course of the disease,
[illegible] explicable under the complex function
of nutrition modified to suit the existing
conditions. All the diseases, included in the
[illegible] of [illegible], may [illegible]
[illegible]ations produced from without, or from
[illegible] substance within the body, giving
[illegible] to modified actions and conditions
[illegible]
[illegible]
[illegible] disease, [illegible]
[illegible]ited conditions of nutrition, as also [illegible]

that function disordered in many

secretory organs, there may be an ex-

discharge of the normal products,

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

but they may be of various kinds. The sub-
[illegible] of the part may be increased or dis-
minished in size, without any perceptible
change in the quality of the fabric.
Changes of this kind producing [illegible]
[illegible], hypertrophy
and atrophy, and [illegible]
of morbid action, may be considered as
pure types of structural disease. [illegible]
[illegible] of structural disease, [illegible]
[illegible] of the constituents of the blood, [illegible]
in the interstices of the tissues, [illegible]
[illegible], or a change in the structures of [illegible]

[illegible]

[illegible]

[illegible]

different characteristics. Some are of a [illegible] [illegible] of surrounding tissues, others being injurious [illegible] [illegible] classification of diseases, including [illegible] catalogue [illegible] Acute and chronic. The former [illegible] [illegible] are rapid in their development, and [illegible] in duration. The latter are characterized by slow invasion, mild course, and long duration. [illegible] [illegible], that the distinction is not of a fundamental nature, as it refers not to [illegible]

[illegible]

[illegible] individual disease may [illegible]

[illegible]

widely different kinds of treatment.

[illegible]

the characteristic phenomena which constitute disease; how the functions of organs in the structure or both combined may be considered as the site of the disease; how the morbid processes are merely modifications of the natural processes of nutrition in a state of health; how they may run a rapid and well [illegible] or assume a long [illegible] and mitigated form, I will now consider in a cursory manner some of the means [illegible], whereby the phenomena constituting

[illegible]

[illegible]

life prolonged, and more particularly how the [illegible] in health can be facilitated. It seems that all the objects contemplated by the medical art may be included under two heads, the preventive and the curative. The former of these [illegible] [illegible] as it is the [illegible] [illegible] particularly engages the attention of the Medical Profession. The preventive [illegible] [illegible] [illegible] life than the curative, [illegible] [illegible] both by physicians and [illegible] [illegible]. Its object is the regulation of diet and exercise, the removal of general sources of disease, and to prevent the spread of contagious

[illegible]

[illegible]

is the modification of existing disease

in a manner most beneficial to the pa-

tient, by [illegible]

[illegible]

[illegible]

the curative treatment, and forms the

chief avocations of the modern physician

The instruments of the [illegible] em-

ployed for this purpose, separated in the

mode of their operation, [illegible]

being placed in two divisions; the direct

and indirect. The former supposed to act

directly on the disease itself, or on the dis-

eased function constituting it; the latter

[illegible]

[illegible]

[illegible] ed in active practice. The [illegible] in[illegible]cations concerning the application of the ind[illegible]ous system of treatment, is to cut short or extinguish disease by a bold stroke to the general system [illegible] [illegible] only be effected by [illegible] [illegible] stimulating agent [illegible] ing, emetics, purgatives, the cautery, [illegible] mercury &c. In such instances the artificial disturbance so excited in the system [illegible] to overcome the natural disturbance existing in it, so that the former malady no longer retains its hold; and the artificial disturbance being removed, the system gradually regains its accustomed po[illegible]

reasonable to suppose, that, in the progress which the "Medical Art" is yet destined to make; when the natural history of diseases, [illegible] when, are no longer matters of conjecture; and when perhaps the physiological action of remedies will be better known [illegible] characteristic feature of the doctrines and practice of all rational medicine.

An

Inaugural Dissertation

On

Dyspepsia,

Submitted to the Examination

Of the

Provost, Regents and Faculty of Physic,

Of the

University of Maryland,

For the Degree

Of

Doctor Of Medicine,

By

Robt. J. Price

Of

Queen Anne's Co.

Maryland.

Diphtheria.

Gentlemen of the Faculty of the University of Maryland: It is with feelings of reluctance that I appear before you in the form of a Medical Dissertation. Not that I am unwilling to conform to a custom which is just and as old as the Science of Medicine but that I feel incompetent to originate and place upon paper any thing worthy of being preserved among the archives of your Institution.

Experience the great teacher of medical as well as all other useful Knowledge has yet to dem-

onstrate (to me) by reducing to practice that theory which you have faithfully and I hope in some degree successfully labored to impart. You will infer then that in a very important sense I am dependent upon the thoughts of other men in writing this thesis.

To assume any other position here than this would be to magnify my ignorance and incur that proscription which should ever be meted out to one who would practice plagiarism.

onstrate (to me) by reducing to practice that theory which you have faithfully and I hope in some degree successfully labored to impart. You will infer then that in a very important sense I am dependent upon the thoughts of other men in writing this thesis.

To assume any other position here than this would be to magnify my ignorance and incur that proscription which should ever be meted out to one who would practice plagiarism.

As is indicated by the heading of this I have chosen as the subject for consideration that seemingly trivial though formidable malady termed dyspepsia. A disease in all probability coexistent with the days of our earliest ancestors. Its ravages upon human longevity have been seen and realized wherever civilization has been known to exist.

It spares neither age nor sex. The old and young, male and female are alike subject to its life abridging influence. By its insidiousness the merchant

is forced to abandon his count-ing room and seek refuge amid the pursuits of rural life. The young student, buoyant with hope and goaded on to greater diligence by the success of past efforts, is instinctively admonished to relinquish his books and engage in a life of physical activity.

From what has been said, it might be inferred that dyspepsia is the offspring of sedentary habits. This however is not always the case, as it is sometimes and not unfrequently the unwelcome guest of

those who are more actively employed.

To say more of this disease by way of introduction is thought unnecessary. I shall therefore proceed to take up in detail its symptoms treatment &c.

Symptoms — Dyspepsia rarely comes under the notice of the physician in its incipiency. After it has existed for a considerable time the symptoms vary with different cases. One of the most characteristic is a feeling of uneasiness in the region of the epigastrium which though,

not pain is frequently more dis-
tressing than pain so that the
patient is at times induced to
strike himself over the stom-
ach in order to supplant the
distress by a change of sensa-
tion. Not unfrequently this feel-
ing of uneasiness extends to
the hypocondria, especially on
the left side often involving
the shoulder and arms.
When the stomach is empty the
uneasiness is augmented and after food
has been taken there is a sense of
fulness weight &c. There is also
vascular irritation of the stomach
giving rise to a sensation of heat

and burning pain with flatulence and distension. Usually there is more or less impairment of the appetite and sometimes the patient has no appetite at all, constituting what is technically termed anorexia. Again there are other cases where the appetite becomes morbidly acute. In connections with the symptoms referred to there are sour eructations and regurgitations of wind food &c. into the mouth. Water-brash, nausea and vomiting are also characteristics of this disease.

Having spoken of the behavior of

The stomach in dyspepsia we
come now to speak of other phe-
nomena which depend upon
the deranged condition of this
organ and which have their
seat elsewhere. These comprise
various disordered sensations, such
as vertigo headache, perverted vi-
sion, ringing in the ears,
wandering pains in various re-
gions of the body and uneasiness
resembling stricture about the
throat &c. There is also a feeling
of malaise, lowness of spirits with
indisposition to mental or phys-
ical exertion. In this disease con-
stipation of the bowels is almost al-

may present. In a large proportion of cases the function of the liver becomes more or less diminished. The bile being scantily secreted, the stools become whitish or hard and diminished in quantity. Sometimes though perhaps rarely it is too abundant producing emesis or bilious diarrhoea. The surface is almost always dry with the hot fixed or regular temperature. In cases where there is great debility, instead of the dry skin we may expect to find copious sweating. The urine shares also in this disturbing affection, becoming highly coloured

of times and then again it takes on an almost colourless appearance with great excess in quantity. In some cases the pulse is normal, in others more or less deranged.

Now the man's cheerful disposition becomes worse and fretful, imagining himself affected with various incurable maladies, such as consumption, organic diseases of the heart &c. And he confirms these melancholy impressions he has with dyspnoea and palpitations of the heart. His sleep is unrefreshing, being disturbed by unpleasant

dreams and not infrequently by nightmare. This however is not always the case, as the patient sometimes sleeps sound by which affords almost the only interval of ease. The patient wears an anxious expression, with sallow skin and great emaciation.

Chronic gastritis sometimes takes on the form of this disease and it is of importance to distinguish the one from the other. In the former affection the pain is more severe the tenderness over the epigastrium is greater and more

permanent, the stools become frequent and the pulse more accelerated. Hot drinks augment the uneasiness in gastritis while in dyspepsia they afford relief. When mucus is vomited there is reason to suspect the existence of chronic gastritis. When therefore, the various symptoms mentioned increase or become developed in a case of dyspepsia the supervention of chronic gastritis may be inferred.

Causes. — As has already been intimated the combined influence of sedentary habits

and improper diet is the
most prolific source of dys-
pepsia. In order to sup-
port due vigor in the
digestive functions of the
body a certain amount
of exercise is necessary, and
in proportion to the want
of it the stomach becomes
debilitated. This organ
would not especially suf-
fer if the diet were in
relation with its reduced
energies, but unfortunate-
ly while the gastric ener-
gies are reduced by seden-
tary habits the food-

food into solutions by impe-
ding the action of the
gastric juices. The habit
of eating rapidly contributes
in a high degree to the same
result by overloading the
stomach which is rendered
unable to appreciate the
quantity of food received by
reason of the rapidity with
which it is swallowed and
therefore does not communicate
to the palate the feeling of sa-
tiety at the proper time.
With regard to indigestible
food, it must be remembered
the term is a relative one -

and has reference to the energies of the stomach, likewise the immoderate use of alcoholic liquors, coffee, tea &c., have also a marked tendency in producing dyspepsia by exciting the stomach into undue action and ultimate loss of power. In fact any thing that diverts from the stomach its nervous energy by concentrating it elsewhere, decreases the gastric actions and tends to the production of indigestion. Sedulous study or other prolonged and absorbing mental occupation conduce to the same effect.

In addition to the causes enumerated there are others which act as depressing agents upon the stomach. Such as tobacco, excessive quantities of cold drinks when the stomach is weak and also emotions which depress, as fear, anxiety and grief.

Treatment — Having spoken of the symptoms and causes of dyspepsia, we come now to speak of the treatment. With regard to this there are a few simple rules which should always be borne in mind and one of

the first and most important of these is to restrict the quantity of food taken at any one time. The stomach secretes gastric juices in a somewhat uniform quantity. When it becomes unduly distended, its muscular contractions must necessarily become impaired. These conditions then would suggest the necessity for keeping the amount of food introduced into the stomach within the limits of its capacity and powers. In order to ascertain this we have only to consult the feelings of the patient.

if there be a sense of uneasiness and fullness after a meal, we know that too much food has been taken. However there are various articles of food which posses various degrees of Solubility. When then the digestion is more than ordinarily liable to be impaired it is important to withhold from the patient those substances which are known to be of difficult Solubility and also to refrain from mixing together in the Stomach different substances which posses different degrees of Solubility.

By observing this we avoid the admixture alluded to and escape the desire to eat too frequently which is provoked by new and various flavours. We should also enjoin upon the patient the necessity of allowing the Stomach time to perform one task before another is imposed upon it. In order to do this not less than six hours should elapse between meals. Allowing seven hours for digestion of a meal and one hour to rest.

Dyspeptics are very solicitous to know what they may eat

and drink. With regard to these enquiries it is impossible to lay down any general rules to suit every case. The Stomach has its idiosyncrasies and in order to give a definite and proper answer we must ascertain what those peculiarities are. To do this we must enjoin upon the patient to eat such Substances as are most easy of digestion, noting their effects, allowing further continuance in the use of that that sits well and abandoning that that seems to offend. There are comparatively few culinary vegetables that

agree well with dyspeptics. All fruits whether preserved, stewed or fresh should be avoided, all smoked salted and pickled meats and those which are tough. Pork veal, domestic ducks and geese are also difficult of digestion. The flesh of very old or very young animals is less digestible than that of the same animals in the intermediate stage of life. Fresh, hot and heavy bread, pastry fried meats hard boiled eggs, soups, gravy &c. should not be allowed. Whatever is doughy resists digestion by reason of its impenetrability by the

fowl juice. Sausages, cheese &c, are also inadmissible. Among the vegetable substances that may be allowed are bread made of wheat which should be light stale and free from acid; crackers Irish potatoes and rice. Fresh milk boiled or unboiled forms a very excellent diet when the stomach is very weak.

The patient must eat tender mutton, beef, turkey &c. The flesh of wild animals will, as a general rule answer a better purpose, as it is more easy of digestion. Oysters raw or roasted are well

adapted to dyspeptics patients.
With regard to drinks, cold water is the best. Wine should not be indulged in.

As much perhaps depends upon the proper mode of taking food as upon the substances to be taken. Three meals a day should be taken and they should be had at regular intervals. The patient should eat slowly and masticate well this food. In order to supply each organ with its necessary amount of blood and nervous force a due amount of exercise should be had both active and passive, of the former walking, is perhaps the

rest of the latter horseback riding should be prohibited. The patient should retire early and rise early. The sleeping apartments should be well ventilated; mattresses should be used instead of feather-beds.

With reference to medical treatment there are two indications to be met, first, to keep the bowels open and secondly, moderately but durably to stimulate the stomach. The former is met by laxatives or enemata, the latter by tonics. It would be better to maintain regular alvine evacuations by means of diet alone

but unfortunately substances that produce this effect are inadmissible by reason of their difficult digestion. Bread, bruised & unbolted flour constitutes a good diet as well as a very excellent laxative in this disease. Rhubarb & aloes combined answer a very good purpose when there is no tendency to piles or uterine irritation. When there is acidity of stomach magnesia should be employed or some other antacid. If there is pyrosis the subnitrate of bismuth may be given in three grain doses three times a day. If there is

a foul breath associated with the gastric symptoms, nitro-muriatic acid is especially indicated. Attention must be paid to the hepatic secretion. If diminished or deranged it may be corrected by the mercurial pill or calomel.

Should flatulence arise, as it will most generally do, some carminative must be employed such as compound spiret of lavender or cardamom, given in doses of a drachm three times a day.

AN

Inaugural Dissertation

ON

On the Constitution of the Mind

SUBMITTED TO THE EXAMINATION

of the

Provost, Regents and Faculty

of

PHYSIC,

of the

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

Doctor of Medicine,

by

Wm F. Hyson

of

Maryland

Session of 1844, 45, 46.

are variously prepared for the different uses for which they are each intended.

The blood is constantly undergoing changes in the chemical composition specific gravity quantity and in the identical particles of which it is composed.

These changes correspond in a very considerable degree to the kind of nutrient material furnished by the blood, taken into the stomach. The great a proportion of vegetable food gives the blood an undue amount of carbonaceous material. The great proportion of animal food gives an undue amount of nitrogenous material. The small

separating the solids and fluids for the uses of the tissues through which it travels, and constantly receiving into the composition atoms of more or less matter which it also changes from the body through the secretions.
According to some authors, the circulation from the blood in twenty four hours is nearly equal to the amount of blood in the body at any one time, but allowing this to be much less or more an average, it would be evident that the portions of matter composing the blood undergoes change of form and effect, leaving the blood is chiefly formed from the chyle, but various important

the combinations of the secondary groups and one of the secondary solids to wit: Hydrogen, Oxygen, Nitrogen, Chlorine, and Fluorine, and Carbon, Sulphur, Phosphorus, Silicon, Potassium, Sodium, Calcium, Magnesium and Iron.

Nearly one fourth of all the elements of organic and inorganic matter are represented in the blood and no elements exist in the blood or tissues of the body which does not also exist in inorganic matter. Few, if any, of these elements exist distinct in the blood, but are each combined with one or more of the others to form the various compounds of the blood as in the combination of Hydrogen and Oxygen to form water

... ate of the blood. Most of the constituents of the blood are termed Proximate Principles. The proximate principles of the blood are those compounds which are formed by the combination of three or more of the elements above mentioned.

Examples of this kind are seen in the combination of carbon, hydrogen, nitrogen, oxygen, phosphorus and sulphur to form albumen, and the same elements in but slightly different proportions to form the cuticle, the hair and the nails.

The proximate principles existing in the blood are albumen, fibrine, globuline, hæmatine, margarine, oleine, cholesterine, cerebrine and a few others.

with well described.

Albumen exists in the blood in the proportion of about sixty seven parts in one thousand, it is composed of Carbon 53.5, Hydrogen 7.0, Nitrogen 15.5 Oxygen 22.0 Phosphorus .3 and Sulphur 1.$\frac{3}{4}$ in 100 parts.

Albumen is more abundant and more nearly pure in the blood than in any of the tissues of the body of which it forms a part, it is also found in the lymph and chyle and in several of the morbid secretions as of dropsy and in pus.

Albumen is seldom found pure but is combined with about six per cent of fatty and saline matter, and these with the albumen [illegible]

in solution with more or less water that it may be precipitated from the solution by alcohol, either tartaric acid acetate of lead and most of the metallic salts

These precipitates are not pure alumina but compounds of alumina with the acid or base used as the precipitant, in case an acid be used the alumina acts the part of a base, as in the sulphate of alumina, but in the case a base be used the alumina acts the part of an acid as in the aluminate of lead, this property of alumina to act the part of either an acid or base in a combination shows its fitness as a vehicle for conveying

through the blood, the various solids which it conveys to the tissues of the body.

The Fibrin of the blood varies in proportion very much. Ordinarily fibrine exists in the proportion of about two or three parts per thousand.

In Typhus and Typhoid fever diseases it is often much less and in inflammatory and other diseases it is often much more, sometimes seven or eight parts per thousand.

Fibrine is of an opaque white color, coagulates more readily than albumen and without the aid of heat or other coagulants. The coagulation it separates itself from

from the solution and shortening around the solid fiber, and this is the process which goes on in the coagulation of the blood and were it not for the fibrine of the blood there would be no spontaneous coagulation, though an artificial coagulation might be effected to some extent by the action of heat or other reagents upon the albumen of the blood.
The blood clot does not consist entirely of fibrine but also the albumen with the white corpuscles of the blood and some of the red, and other substances caught in the meshes of the fibrine while the process of coagulation is going

the fibrine is most abundant in the arterial blood, least so in the venous and least so in the splenic and portal veins.

The Corpuscles constitute about one eighth of the entire blood and have a greater specific gravity than any of its other component ingredients

The Corpuscles represent at least two of the proximate principles of the blood, albumin and Haematine, globulin resembles both Casein and albumen, but most nearly perhaps the latter, all the elements of which it also contains with the exception of phosphorus though not in the same proportion

globulin constitutes about one of four per cent of the red Corpuscles the Haematine or is Contains the colouring matter of the blood, and is distinguished from all other organic matter by its peculiar black Color. Its solubility in the water and in the serum of the blood. The coloring matter being Contained within the cell walls of the red Corpuscles any process of which these corpuscles may be separated from the blood, will leave the residue colorless or as experiments shows of a pale yellow color.
Haematine is Composed of Carbon, Hydrogen Nitrogen Oxygen and Iron and constitutes about one per cent.

of the red corpuscles, is also bright
in the contents of the entire blood.
The fats of the blood appear in
quite a variety of combinations.
Some of the most important of these
are Margarine, Oleine, Cholesterine,
and Cerebrine.
These are all, what are called,
fixed oils, with the exception of a
volatile fatty acid on which the
odor of the blood depends.
Margarine and Oleine belong to the
class of saponifiable substances and
consist of a base which is sol-
uble in water, and a sweetish
syrupy substance, called Glycerine.
Therefore the margarine and oleine
of the blood which go to make

up the adipose tissue of the body, may be considered the margarate and oleate of Glycerine.
The elements of which these fats are composed are principally Carbon, Hydrogen and Oxygen and perhaps an equivalent of water.
Cholesterin is a fatty substance which is nearly always found in a solid state. It is not saponifiable, and occurs most abundantly in the bile, biliary Calculi and certain morbid secretions.
Cerebrin is a name given those fats which are peculiar to the brain and nervous tissues.
In addition to the substances already described...

the serum of the blood contains chloride of sodium and potassium, carbonate of soda, tribasic phosphate of soda, phosphate of lime and magnesia, oxides and phosphates of iron and sundry other substances not well defined, as urea, biliary colouring matter and accidental substances.
All the ingredients of the blood exist in certain prescribed proportions and relations to each other and to the objects for which they are each intended. So that if there be a lack of but one of the elements of this important compound the other will very soon demand a new

supply of the circulating material.
Examples of this kind are seen in
the sensation of thirst when there
is a lack in the watery con-
stituents of the blood, and a sense
of hunger when there is a lack
of those solid constituents which
are required for the nourishment
of the tissues. These two instances
are of so common occurrence—
that all are familiar with them
But there are very many other
instances in which demands are
set up which are not understood
and consequently not supplied,
and as a further consequence an
abnormal condition of the system
results, which if not corrected

produced therein one may be stated.
Such are the substances of which the blood is made up, and in their arrangement, in its formation, they present some of the most interesting specimens of chemical Combination known to science, of these much has been learned, but much more yet to be learned.
How the blood is chiefly formed from the chyle, and that again from the food taken into the Stomach, How the blood receives its vitalizing principle, Oxygen from the atmosphere of respiration in the lungs: how these all go to the supply or repair the waste and

tion of the tissues of the body, and
then the blood on its return to
the heart and lungs for a
new supply of nutrient material,
brings back with it these useless
and worn out materials of the
tissues through which it travels
to be cast(ed) through the lungs, kid-
neys and skin.
These will soon be subjects of study
and examination to the scientific
physician.
The Eye beholds with wonder these
changes, relations and dependences,
The fathers of the profession con-
fess themselves as yet, but just
past the threshold of Science.
Who can grasp the idea of life?

How soon we come [illegible]
ly we come to the [illegible]
things better [illegible] the [illegible]
the gentlemen! That Empire has
been plainly learned to
stimulate to still further ad-
vances and more daring ad-
ventures in the field of human
science.

1866

AN

Inaugural Dissertation

ON

Rheumatism

SUBMITTED TO THE EXAMINATION

of the

Provost, Regents and Faculty

of

PHYSIC,

of the

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

Doctor of Medicine,

by

John B. Norris

of

Baltimore County Md.

Session 78

Thesis

Rheumatism is derived from the Greek word perpa. perpatos, which signifies a defluxion or a changing neuralgia, sometimes it is seated in the joints, sometimes surrounding the joints, and also, in the muscles. It may therefore be denominated muscular articular, articular and synovial, A knowledge of this disease is remarkably important to the Medical Practitioner, inasmuch as it causes intense pain and suffering to the patient. Rheumatism is divided into three forms, viz; Acute, Subacute and Chronic.

First; Rheumatism acute is defined as a specific inflamation of the

fibrous tissue surrounding the large joints, the synovial membrane in the joints may be involved. It may attack the lining membranes of the heart by metastasis, and it is not denied that it may attack other tissues of the body to some extent also, but the several named parts are most generally involved.

This inflamation rarely suppurates as is defined by most Pathologists; but it may attack the lining membranes of the heart, then its results may be the same as common inflamation, by producing the effusion of serum and lymph, (and) causing the morbid friction sound. —

It may the areola tissue and synovial membranes, in some cases, terminate in suppuration, although this rarely happens. We are taught that the Pericardium is a fibrous-serous membrane investing the outside of the heart, therefore it must be the fibrous portion of this membrane which is first involved;— although the internal membrane I believe is more frequently attacked first by metastasis.

This inflamation attacks the large joints, such as the ankles and knees, perhaps but one at a time, sometimes two and frequently more than two at a time, It may remove by metastasis

from one to the other and then return to the one first affected again, The elbow and wrist joints are more frequently affected than the shoulder.

The hip joint may be affected, but I believe less frequent than the knees and ankles, Two varieties of Acute Rheumatism are spoken of; one, which affects the parts around the joints, (which) is called the fibrous Rheumatism and the second involving the synovial portion of the joint. In the fibrous form the inflamation and fever run higher than in the synovial form, and it is said, that the fibrous kind is more liable to retroceede towards the heart. By some the synovial or

arthritic form is said to be analogous to Gout and is also called Rheumatic Gout, Symptoms of Acute Rheumatism There is a full and bounding pulse of the sthenic kind. Acid perspirations especially more so in the fibrous variety than in the synovial, The tongue is thickly furred and red around the edges, the urine produces a brick dust sediment when allowed to stand for a time, The pain is great and the limb is tender to the touch, The patient has not the ability to move the limb; if can move it; it is with great distress. The swelling is not so great as the amount of pain, neither is the redness as great as the

swelling. The materies morbi of Rheumatism is said to be an increase of acid in the blood, which is lactic acid, therefore this disease is produced from the blood. The blood has an increase in amount of fibrin; which is said to have been found increased to the amount of seven, and as high as ten, parts in the thousand, and when drawn, if alowed to stand, it assumes the buffy coat, Acute Rheumatism may retrocede and involve the membranes of the heart, which may be overlooked at first by the Physician, therefore it is always deemed advisable to feel over the Praecardial region

and perceive if there are any tender
ness over that part. The patient
may appear delirious as if some
cerebral derangement were present;
but all this may be owing to some
Rheumatic complications of the
external or internal membrane
of the heart or perhaps both at the
same time. Symptoms of Pericard-
itis resulting from Acute Rheuma-
tism and other causes; pain over
the region of the heart increased
on pressure, dry cough, there is
an inability to lie on the effected
side, depression in the epigastric reg
ion, these are some of the symptoms,
besides we have some prominent

physical signs, which are produced, the rubbing of the inflamed surfaces upon each other, There are two of these morbid sounds, one external or the friction sound and the other internal or bellows murmur, which denotes Endocarditis.

The external I say is produced by the rubbing of the ~~the~~ two inflamed surfaces upon each others— That is the serous surface of the heart and Pericardium: besides these, we may have dulness on percussing that region and an extension to some extent between the Cartilages of that region. The internal or bellows murmur is produced by the deposit of

fibrinoid substance on the valves, which obstructs the direct flow of blood on its way through them. This sound is a diagnostical of Endocarditis of the heart or inflamation of internal investing membrane of the heart, although this sound may be present in other diseases, or partial disease of the heart to some extent. But besides this great physical sign, we have some prominent symptoms, marking closely the existence of this affection. These are dyspnoea or difficult breathing and irregular actions of the heart and intermissions. This bellows murmur may be heard in some cases from the first,

while the pain may be slight and again the pain may be so lacerating that the patient will be unable to lie down, that is he will have orthopnoea and death may be the result. Causes: Rheumatism may be caused from exposure to cold or moisture, or it may be produced by any thing which has a tendency to check secretion. Diagnosis: This disease may be confounded with Gout, but Gout always attacks the small joints, while Rheumatism the large joints. The functions of digestion is impaired in Gout, which is not so much so (in) Rheumatism. The swelling is greater and of a more vivid red in

Gout than Rheumatism, Lactic acid is present in the blood in Rheumatism, while in Gout we find the Lithic or or uric acid diathesis. Rheumatism attacks young persons, while Gout the middle aged and old persons.

Prognosis. This disease is not considered dangerous, except in very young persons and when the heart is implicated, or becomes so, by metastasis, Rheumatism is said to be hereditary by some, that is, it follows from parent to child.

Subacute, This runs rather between the acute and chronic, This form is very susceptible to the muscles, but may attack the joints and

various parts around. It has various names applied according to the part upon which it may take. Thus, if it attacks the loins it is called lumbago, if the neck, it is torticollis, if the muscles of the chest, and sciatica when in the direction of the sciatic nerve. It may perhaps attack the heart and result in great danger by causing organic disease of that organ, or cause death by interrupting the free contractions of that organ. The pain in this form may be considerable, but the fever and swelling are not so great.

Chronic Rheumatism. This form is

of the sequel of the acute, or it may be produced by the same causes, which produce the acute. Some writers divide this form into two species, one of which is somewhat similar to the acute and is attended with local heat and swelling, whereas the other specie is accompanied with coldness and stiffness of the affected joints. In the former of these the pains are increased on pressure and by movements of the limbs with some pyrexia or fever at night. This kind claims a near relationship to the acute and may run into or be a sequel of the same, which has been known to have

crippled the joints, which is attacked, and so may the acute form of Rheumatism cause deformity in some cases. Chronic Rheumatism as a general thing has no fever, but is attended with a dull pain which is worse at night and in damp cold weather. Old persons are more susceptible to Chronic rheumatism than young persons and it may last for a long time causing stiffness of the limbs and joints. If a person recover from this form is is liable to return, or the the person may be effected, especially more or less in wet and damp weather,

Treatment of Acute Rheumatism.

Bloodletting; Bloodletting may be practiced in the acute form with good results, when the fever is high and the pulse strong and full, especially in the fibrous Rheumatism, but carried too far it is liable to produce Cardiac complications. Bloodletting at the very onset of this form is apt to relieve pain and aid in breaking the attack, I should be very careful and would not bleed only under circumstances, that is, I might draw blood if the patient was young and of the sthenic kind, or I might say, that I would bleed, if the patient were

young and of plethoric habits.
The fibrine, which is of an abnormal
amount in this disease, is said not
to be diminished by Bloodletting, but
it will relieve pain and rid the blood
of its morbid matter to some extent.
Opium is very valuable in this disease.
It has the power of cutting short the
attack and alleying pain, especially,
in its combination with other medic
ines, that is in the form of dovers
powders. It will act as a diaphoret-
ic by producing the secretions from
the skin and at the same time it will
alley pain, which is indicated in
this disease. Very valuable results
may be produced by administering

(may be produced by administering)
Opium in large doses at the onset of
the disease, almost exclusive of any
other remedy, but its constipating
effects, which it has on the bowels,
should be watched, although this
manner of administering should
be governed according to the habit
and condition of the patient, but
I believe very valuable results may
be produced by giving Opium in
one grain doses every one or two
hours, until its effects are perce
ved. In this manner it is not so
liable to promote a constipating
effect on the bowels, although it is
requisite to administer some laxative

to correct this effect. Purgatives are very good but should not be carried to a great extent. Nitrous Powders are valuable for their diaphoretic and their effect which they have on the bowels. An emetic of Ipecac might be given in the onset of the disease in case of acid eructation of the stomach. Potassae Nitras is very valuable for its effects on the secretions more so especially for its diaphoretic effect. It has also an effect on the urinary organs. and it may be administered in doses of gr X or XX at a dose or one ounce may be given in course of twenty four hours in divided doses, without any bad results.

Aconite is said to be good in some cases to allay pain and nervous irritability in combination with Antimonial wine say ℥IV ℈ of Aconite to ℥iii of Antimonial wine say dose from XX to XXX drops every three or five hours. What is good in one may not prove so in another. so we must use our judgment according to circumstances and the condition of the patient.

Alkalines are very valuable medicines in this disease if not carried to a great extent. They have the power of correcting the acid diasthesis which is present in this disease. Bicarbonas Potassae may be given for its diuretic effect.

It may be administered to the amount of one (half) ounce per day in devided doses, Bicarbonas Sodae is also considered very good to correct the acid diasthesis. Colchicum is a very valuable remedy and many are reported to have been cured, by this medicine, almost without fail, It has the power of acting upon the secretions especially on the ~~kid~~ kidneys and the bowels, which make it a valuable remedy, and also, it has a decided sedative effect on the circulation. It may be administered one doses of m x at a time, of the vino, Mercury migh be given but not to any extent as it may or might cause debility. The treatment of Pericarditis

and Endocarditis or Rheumatic carditis when both are affected is principally the same as rheumatism of other parts, only different to meet circumstances. Bloodletting may be practiced if certain indications demand it, such as plethoric habits, a full and strong pulse; but local bleeding over the Praecardial region may be practiced in this affection with good results, Mercury may be prescribed in this also if the affection be of the Rheumatic origin and the patient of a sthenic type. It may by practiced cautiously until its salutary or Constitutional effects are shown. Blisters or counter-irri-

tation may be applied externally, if effusion of serum and lymph be indicated by the Physical signs, Other medical agents and remedies may be useful if the hearts actions indicate them. Treatment of Chronic Rheumatism, Pulvis Spicae, Comp, is good to alley pain and to promote diaphoresis in this form as well as in the acute. Potassii Iodidum is a valuable medicine in this form. Arsenic administered cautiously in some cases of the Chronic is reccommended, Warm water baths raised to a temprature of one hundred degrees ~~is~~ are advantageous. In all forms of rheumatism I should reccommend the patient

to be clad well with warm flannel next to the skin, In the subacute form local bleeding may be practiced, wet blisters should be used with caution as they might have a tendency to promote metastasis, Opium in the form of Dovers powder may be used with good results as in the acute, and other medicine in use, which are valuable in the acute may be used in this form with advantage; such as colchicum, Opium, &c, and the bowels should be kept well evacuated. In conclusion I have only to add that there are other medical remedies as well as local that are lauded by

the vulgar which have no credit
with Respectable Medical Prac-
titioners and therefore I humbly
submit this to your perusal
and consideration

AN

Inaugural Dissertation

ON

Acute Inflammation

SUBMITTED TO THE EXAMINATION

of the

Provost, Regents and Faculty

of

PHYSIC,

of the

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

Doctor of Medicine,

by

James Wo. Maynard

of

Maryland

Session 18

A thorough knowledge of inflammation should be sought after by every person who has taken honors with the insignia of the science of medicine. I have chosen it for the subject of my thesis, because I hope by writing upon it, to acquire a knowledge I should not perhaps otherwise obtain.

It affects all parts that are furnished with bloodvessels, it is more easily excited by external causes, and therefore it is more common than any other special disease. A majority of the diseases to which the human frame is liable, begin with inflammation or end in it

or are accompanied with it during some part of their course, hence the necessity of giving it such marked attention.

The surgeon having a foreign body to remove boldly makes his incision into human flesh, well knowing that inflammation will ensue, and reunite the incised part, or he may have an indolent ulcer, with dirty ulcerating cavities, in which case he freely and fearlessly lays open the part, knowing that by an inflammatory process healthy granulating substance will be deposited upon the clean surface, and the lost part be restored.

But it is not to the inflammation that glues together incisions or restores lost parts or reunites fractured bones that I shall direct my attention - it is to inflammation as a destroyer of parts.

A part may be severely bruised, and immediately after the reception of the injury irritation ensues. The Cerebro-Spinal axis takes cognizance of it, this new impression is conveyed to the great centre of circulation, and the heart as a result of this new impression quickens its action, sending sending the blood with more rapidity, and with more violence to the part.

The capillaries immediately surrounding the wounded part first

contract upon their contents, but very soon they relax, and dilate permitting a greater amount of blood to flow to the part. The bloodvessels are elongated as well as dilated, and thrown into curves and made more tortuous. The most remarkable change, says Paget of shape of the small vessels of inflamed parts, is that in which they become aneurismal or varicose. This dilatation has its seat in the small arteries, and veins as well as the capillaries of an inflamed part.

When a vessel first contracts in inflammation, the blood diminishes its velocity, but when the vessel dilates it flows faster than it

cited brain to this morbid condition.

The state which is thus induced by stimuli is what is commonly called "active congestion." It consists briefly in an enlargement of the blood-vessels with an increased flow of blood in them.

"Here now is the neutral ground between health and disease. A step in one direction may effect the return to health, in another to inflammation and perhaps death.

If the latter occur the blood becomes gradually slower until in some of the vessels it becomes stagnant; becoming so first in the capillaries and those least direct from the artery to the vein. In the focus

of inflammation. This is always more or less stagnation, in and around the organ more distantly around. Determination.

As a result of inflammation changes of greater or less magnitude - governed by its intensity - occur in the constituents of the blood. If blood be drawn from the arm of a patient laboring under inflammation in any part of the body it will be found to coagulate more readily than blood drawn from a healthy system. In other words a clot will form by running upon its surface the "buffy coat", and it will be more or less "cupped". A deep

Cup is indicative of intense inflammation, and vice versa.

This buffy coat of the blood is found only in blood drawn from the system of a patient suffering from inflammation and in the blood of a pregnant female. It is not always present during the latter condition of things but it sometimes exists.

The white or colorless corpuscles are increased in number, and instead of flowing along on the outer side of the circulating fluid, they are, together with the red corpuscles which previous to the inflammatory flowed along through the center of the blood, mingled together. The platina

also it increased in quantity and mix
-ed with the other constituents.

Accumulation of fibrin, lymph, plastic matter or plasma takes place more or less perfectly at the seat of inflammation, and this plastic matter either becomes organized, absorbed, or degenerates into pus. The latter of which I believe I have to deal with on the present occasion.

Pus is degenerated plasma, the act of degeneration taking place amid the tissues where it is found. All lymph that is thrown out has a tendency to form fibrous, fibro cellular or connective tissue, but this may be interfered with in different

traps, and the result of interference is its degeneration into pus.

In order that excited lymph may form new tissue it is necessary that the inflammation should not run too high. If it exceed that which is necessary for the formation of new tissue it degenerating into pus. Such lymphs will be continually thrown out hindering the due process of development - drowning it at its root - and hindering it rather because all the general heart-pulsed through the continuance of the disease the lymphs freshly formed will be less perfect organization. Or it may be thrown out beyond the reach of vitality and

then degenerate for want of life power sufficient to produce blood vessels and thus become organized.

I do not think it necessary to dwell longer upon this part of my subject, there are other circumstances under which pus may be formed, but the foregoing I deem sufficient for the present occasion.

Termination.- There are but two ways in which inflammation may terminate, one is in deliterescence and resolution, the other in ulceration and perhaps gangrene.

Causes.- The causes are very numerous, Cuts, blows, sprains, Cold, Foreign bodies &c.-

Symptoms. Discoloration is the first apparent change which manifests itself in a part attacked by inflammation. The discoloration may be confined to a small spot or it may be very large, as in erysipelas when it sometimes spreads over a large surface. Sometimes it is very slight, at others assuming a deep purple. Its presence is owing to the crowding of the red corpuscles in the dilated capillaries, and sometimes it is increased by the diffusion of the coloring matter of the red corpuscles into the surrounding tissues.

Pain is a constant accompaniment of acute inflammation.

It is that which makes us dread so
much this disorder - It is that which
makes the poor patient shudder when
he feels its powerful influence creep-
ing upon him - it is that which
makes us look upon inflammation
with feelings which Convulsions is an
ought to horror. What can create in
the bosom of a humane physician
feelings of sympathy and sorrow to
a greater extent than the sight of a
poor patient lying prostrate upon
his couch with every muscle of the
body rigid gasping for his breath,
a little - very little - at a time, what
would he not give for one long ling-
ering respiration? But he dare not

attempt it for the moment he doubtless inflamed pleura will send a dagger to his heart which will make it seem owing greater than the rude grasp of the chilling hand of death.

Pain was at one time thought to be owing to the formation of new nerves in the [illegible], but that cannot be correct as pain is sometimes felt at the onset of the disease, before new nerves could have time to form. It is now supposed to be caused by pressure upon the nerves of the part; and the nerves themselves may be involved to a certain extent in the inflammatory condition.

Swelling is seldom absent in

acute inflammation of the external parts of the body, although it may be in certain internal structures however virulent the morbid action. Under the latter head may be enumerated cartilage, serous membrane, bones, vessels, tendons, nerves, and most of the different viscera. The parts that are liable to mucous swelling when attacked by inflammation are the Oesophagus, glottis, tonsils and uvula, for the reason that these parts are largely supplied with lax cellular tissue, which when it swells is very receptive of infiltration of serous and other fluids. The swelling may be hard or soft, the first denotes infiltration of plasma, the latter of serum.

The immediate causes of pneumonia are two-fold, first engorgement of the capillaries, and secondly, and mainly effusion of serum and fibrin, to which may be added in the more severe forms pus and blood.

Vogel. Says seems to be but little known about the cause of this change in an inflamed part. It seems reasonable to attribute it at least in part to friction produced by the blood hurrying along at so rapid a gait through its vessels, and the rapid union of the oxygen of the air with that fluid.

Treatment.

The first point to which the physicians attention should be directed

in the treatment of inflammation, after having been once administered a purgative if this [illegible] be [illegible], is rest and elevation. These two are of paramount importance and should claim our closest attention. Blood like everything else obeys the laws of gravitation, and travels more readily down than up, consequently an inflamed part should always be elevated. This can be very easily accomplished, should the inflammation be seated in one of the lower extremeties, by means of the anterior splint. If its seat be in the thorax that part should be elevated by bolsters or pillows. And the part should remain in a state of rest

for the reason that if we exercise an arm or a leg while the corresponding arm or leg is permitted to remain at rest the one which is being exercised will receive the greater flow of blood, and every physician must know that if we can prevent an undue amount of blood from flowing to a part we thereby lessen the chances of inflammation.

Bleeding is one of our most valuable remedies in the treatment of acute inflammation, but we cannot always avail ourselves of this remedy. A person may be in an anemic condition, and yet suffer from inflammation, to one under such circumstances

would think of using the lancet. And apart from this, there seems to be a tendency in all diseases of the present time to assume a low typhoid type. I have frequently heard it remarked by physicians in my neighbourhood that in consequence of this typhoid tendency of disease it is decidedly dangerous to use the lancet. This may be so, my own opinion however is that when we are called in at the outset of the disease if the lancet is admissible - What I mean by that is - if the pulse be hard, full and bounding, and sometimes the pulse may be hard and small when if a blood-vessel be opened and at the same

time a finger be applied to the wrist as the blood flows the pulse at the wrist will be found to rise, showing that the blood was oppressed by the tense muscular fibres of the artery. In both of these cases blood should be drawn either locally by the cupps or leeches; or generally by the lancet, as the judgement of the practitioner may decide. And if it be a severe case follow the drawing of blood with a good sized blister.

I have said in the beginning of my thesis that inflammation is preceded by congestion, and there being only one step between this and the latter condition, if we can draw

blood from the over charged capillaries or contiguous ones we certainly must lessen the causes of inflammation, and sometimes cut it short when it does exist. And if we succeed in this we must lessen the "typhoid tendency," as it is generally produced by inflammation.

In order that I may be better understood I will add the following as a synopsis of the whole, Should I be called to a patient who was suffering with acute inflammation, and whose constitution was vigorous, pulse strong, and quick and hard I would draw blood by means of the lancet with a view to sedation.

and checking the progress of inflammation. But on the other hand should the patient be weak I would not employ general blood letting though I might use cupps or leeches. For instance in hepatitis or gastritis attended with a condition of the patient that would forbid general bleeding I would employ wet cupps if admissible, and if not I would very likely use dry cupps.

The little experience which I have had in the practice of physic has taught me to place great reliance in the drawing of blood by cupps, by this means we can often take it directly from the part without the

system feeling its loss to any considerable extent. When the lancet is used we should always aim for effect and not for quantity, except in some cases of active hemorrhage. In all cases the pulse should be the guide as to the quantity to be drawn. And we should give attention to the position to be occupied by the patient during the process of bleeding. If we bleed in an upright position the loss of five ounces of blood will be felt more sensibly than double that quantity while lying horizontal.

Purgatives are indispensable in the treatment of this disease, they not only deplete from

the system, but they act to a certain extent as counter-irritants, inviting a portion of the irritability to the alimentary canal. It is hardly worth while for me to occupy time and space in enumerating the purgatives, and cathartics that may be used in the treatment of inflammation. If the case demand active treatment, a dose of Hyd. Chlo. mite, Podophillin ex. Eleterium (if the object be to produce watery stools) Gamboge, Scammony, and a number of others may be used. I have found that when alone are admissible that a combination of it with Calomel and Ipicac would act very handsomely, but I

must not give this Combination
always. Sometimes in the treatment of Inflammation it is necessary to activate the secretive functions of the liver, and in order to do so it is frequently necessary to give a Cholagogue or alterative dose Combined with some preparation of Opium. After the purgative has acted - very likely it had been followed by a dose of Ol. Ricini, or Magnes. Sulph - it is generally Customary to apply the

Blister. - This should always be applied as near to the seat of the disease as possible, and permitted to remain on until the parts beneath

are completely softened, and then removed and followed by a warm poultice or Cabbage leaves. The latter seem to be in vogue in my neighborhood, and are really very good things in the hands of a proper nurse who will trim them well and make them comfortable to the feelings of the patient. But as good nurses are so scarce in the Country I would advise a poultice made of Flaxseed finely ground, and mixed up with hot water until it is of a proper consistence. There is oil enough in the seeds to prevent its adhering to the patient, and they can generally be gotten without

muscle trouble. When the object is to produce a rapid vesication, boiling water may be used or Ammonia either in the liquid or solid state rubbed up with lard and spread upon a cloth and laid upon the part. When the liquid is used a cloth should be saturated with it, and laid upon the part and covered with a napkin to prevent the Ammonia from escaping.

Sinapisms are sometimes applied with decided advantage. I applied one to the whole anterior portion of the chest of a man who was actually shedding tears from the severity of pain in his chest and it gave him almost instant relief.

The actual Cautery is a very valuable agent in the treatment of inflammation when deep seated. I have repeatedly derived advantage from the application of the hot iron in the treatment of Coxalgia. But it may prove to be a very dangerous weapon in the hands of a careless physician.

Liniments are often indicated and they are generally very effective remedies, Or anything that will withdraw the overcharged blood-vessels lessen the chances of inflammation so will anything which diminishes the heart's action Control to a greater or less extent the tendency to this disease

The most important of these are the veratrum viride, aconite and digitalis. The latter being an accumulant it is customary to discontinue it every fourth day.

Anodynes, diaphoretics, and diuretics generally are indicated in the treatment of this disease.

Mercury is a very valuable remedy, It not only acts as a depletive by its purgative properties but it act upon the liver thereby unloading the portal system, and when used so as to impress the system at large it acts as a bridle upon lymp. Potass. Nit. and tartar emetic beside their other effects

may be used with the same view.

Local treat.— Beside that which has been already given, consists in cold, tepid and astringent applications to the inflamed part. Iced water, bags of ice, plumbi acetas, iodine, argent, nit, &c.— combined or not with tr. opii. When the inflammation is superficial, some advise a cold stream of water to be kept running upon the part by means of a piece of candlewick laid with one end in a basin of water, while the other end rest upon the part, or upon cloths laid over the inflamed part. Others advise that the water be

poured from a pitcher at stated periods, especially should this latter course be pursued in meningitis.

But after all our efforts to bring about deliquescence and resolution inflammation may progress until pus is formed. Pus being formed and lying in its circumscribed cavity, not quietly as every physician must know but insidiously threatening to burrow among the healthy tissues and do extensive damage if not removed. It may be removed in two ways, first by absorption, but not as pus. In order that this may take place the watery portion

or such liq. or is first absorbed
and then the contents are broken
up and then absorbed, leaving the
part in a condition for healthy
granulation, or by destruction,
a Bistoury or abscess lancet being
introduced and the offending
matter allowed to discharge.

AN

Inaugural Dissertation

OF

The Non-Antiphlogistic Treatment of Acute Diseases.

SUBMITTED TO THE EXAMINATION

of the

Provost, Regents and Faculty

of

PHYSIC,

of the

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

Doctor of Medicine,

by

James Bryan Powell

of

[illegible]

Session of [illegible]

1865 & 66

the times: A mere recruit is not expected to [illegible] during his scholastic training in the manual of arms, to the art and science of war; nor, a priori, a medical graduate [illegible] of [illegible] [illegible] of the [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] of the theories, and nicely rounded points of others.

In thus [illegible] asserting our position with the subject which we propose to treat in these pages, we desire it to be so understood that we, as a matter of course, entertain the fullest appreciation of what has been propounded from the various pens.

As there is not a dogma in the whole course of therapeutics which [illegible] [illegible] de [illegible], [illegible] that I am not required to follow the ipse dixit of any [illegible] of the profession. [illegible]

[illegible] should never be warped by a grovelling faith; should never be entangled in the meshes of a blind incredulity; should be permitted to fly at will, and strive to attain more useful and consequently better things.

We are told in limine of our studies that medicine is not a science but an aggregation of sciences, embracing within its boundary an [illegible] limit of discovered and undiscovered principles and [illegible]. This term aggregation is [illegible] the [illegible] and [illegible] sciences, [illegible] "vexata questio" exists here. For, no matter what may be the disagreement among doctors, — every surgeon, every practitioner [illegible] from the accumulation of cycles [illegible] [illegible] willing [illegible] to add to this by his own experience, and ply his art in a manner suitable to his views — for weal or woe — for kill or cure. He would most certainly [illegible]

[illegible]

the path of the routinist. The theories [illegible]

but little at the sick bed; and, the physician [illegible]

his time here with them, [illegible]

expose himself to severe responsibility. The truth of this is

self evident, and: "Fortunately" says Dr. Austie in his ad-

mirable work on 'Stimulants & Narcotics,' "the practice of the med-

ical art is in advance of the theories which are still propounded

in books; and, while the formal teachings of the day, for the most

part separate physiological agents into rigidly defined groups,

as food [illegible] the practical tact of medical

men is rapidly discovering the propriety of applying these

terms depends entirely upon the conditions under which

any particular substance is administered, and that among

these conditions dosage [illegible] the highest rank."

This term dosage is here happily introduced, for it

will be found to be an important relation to the [illegible]

[illegible] acute diseases. This time was only [illegible] [illegible] [illegible] the [illegible] [illegible] [illegible] [illegible] [illegible]. [illegible] x.

[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] common cause into the depths of [illegible] [illegible], pathological, and therapeutical [illegible] [illegible] not, under any circumstance, adopt the antiphlogistic regimen. Nothing like this system [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] antimony" could satisfy a person of modern medical views. That which supports the vital powers, and tends to meet inflammation at every point, [illegible] such as proper support by means of food and other stimulants, will at this period be undoubtedly better received.

The adherents to the antiphlogistic school, now

[illegible]

[illegible] [illegible] [illegible] [illegible]

institute. Thank, heaven! for the welfare [illegible]

man, we see it fading away in the far off distance.

It is now taking its station with [illegible]

over with unmeaning mystic forms or characters, of the

ages of superstition. We no longer give importance [illegible]

the sayings of men, when observation proves them of

unsound doctrine. We no longer deify writers and

great men, or [illegible]. Those dark times

have all passed away. In not understanding

the medical agents [illegible] [illegible] [illegible]

and those blind things to cure their sick. Well then

[illegible] [illegible] [illegible] [illegible] [illegible]

cian.

Antiquity is, nevertheless, entitled to our res-

pect and admiration. It has transmitted many things

[illegible]

[illegible]

[illegible]

[illegible]

~~[illegible]~~ vulgus. But the mind of man was too noble

to stoop to the prejudices. It soon burst its chains

and published the truth whenever it was found.

Laenec has become immortal by introducing

auscultation [illegible]

[illegible]

[illegible]

[illegible]

[illegible] the prize; Laenec polished, and bore it away.

[illegible]

students of his time the fallacy of the circulation

and demonstrated the fact by severing the Gordian

knot, and thus permitting the crimson stream to

[illegible] [illegible], [illegible] [illegible] [illegible] [illegible]
[illegible] revelation the greatest mind, as it were, gave
the finishing stroke, made up the grand picture
of [illegible], and published that idea, no longer
a theory, but an established fact.

Such, we may consider, is the great fact of the age and theory; such is the doctrine of the Circulation, and that of Percussion.

The treatment of disease, as we have already asserted, has kept [illegible] [illegible] [illegible] many systems to induce its cure or alleviation. Although [illegible] [illegible] [illegible] are not unworthy of observation.

The [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] passing [illegible]. [illegible] [illegible] [illegible] [illegible] [illegible] Englishman by birth, [illegible]